PROCEEDINGS

OF THE

FIRST ANNUAL CONVENTION

OF

THE COLLEGE ASSOCIATION

OF THE

MIDDLE STATES AND MARYLAND,

Held at the University of Pennsylvania, Philadelphia, November 29th and 30th, 1889.

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UNIVERSITY OF PENNSYLVANIA, November 29, 1889,
11 o'clock, A.M.

THE First Annual Convention of the College Association of the Middle States and Maryland assembled this day, in the Chapel of the University of Pennsylvania, at 11 o'clock, A.M., and was called to order by the President, Provost William Pepper.

Prayer was offered by President T. L. Seip, D.D.

Upon the calling of the roll the following Colleges were reported as represented by the delegates named.*

BUCKNELL UNIVERSITY, Pa., Professor F. Loomis, A.M.

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* Or noted during the sessions of the Convention.

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JOHNS HOPKINS UNIVERSITY, Md., Dean Edward H. Griffen, Ph.D.
LAFAYETTE COLLEGE, Pa., Professor Francis A. March, LL.D., and Professor Wm. B. Owen, Ph.D.
LEBANON VALLEY COLLEGE, Pa., President C. J. Kephart, A.M., and Professor George W. Bowman, A.M.
LEHIGH UNIVERSITY, Pa., Professor Benj. W. Frazier, M.A.
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COLLEGE OF NEW JERSEY, N. J., Professor Allan Marquand, Ph.D., J.H.U., Professor Henry F. Osborn, Sc.D., and Professor Geo. Macloskie, LL.D., Sc.D.
UNIVERSITY OF PENNSYLVANIA, Pa., Provost William Pepper, M.D., LL.D., Trustee James MacAlister, Ph.D., Dean Horace Jayne, M.D., Professor Wm. A. Lamberton, A.M., Professor Edmund J. James, A.M., Secretary J. Y. Burk, A.M.
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ST. JOHN'S COLLEGE, Md., President Thomas Fell, A.M.
SWARTHMORE COLLEGE, Pa., Professor Arthur Beardsly, C.E., Professor William H. Holcomb, Ph.D., and Professor Benjamin Smith, A.M.
UNION COLLEGE, N. Y., President H. E. Webster, LL.D.
URSINUS COLLEGE, Pa., Professor Bomberger, D.D.

After the appointment of a Committee on Nominations, the Chairman announced the opening conference on "The Sphere of Technical Teaching in the University Curriculum."

President C. K. Adams, of Cornell University, as Referee, read the following paper:

THE PLACE OF TECHNICAL INSTRUCTION IN OUR COLLEGES AND UNIVERSITIES.

FEW things in the history of modern education are more striking than the great demand for instruction in the several branches grouped together within the scope of the word "technology." In Europe the growth of technical schools has within the last half-century been perhaps even more striking than the advancement of education in other directions. In France, in Germany, in England, in Austria, even in Italy and Russia, schools have been planted and nourished for the purpose of training engineers and architects and even skilled artisans, with a purpose and earnestness akin to that shown in establishing schools for training teachers, physicians, lawyers and clergymen. In the United States the same impulse is coming very generally to be felt. The technological schools are everywhere prosperous. For this there is a sufficient reason. Much as we hear the call for better clergymen, better lawyers, better physicians, the demand is even louder for better engineers, better architects and better workmen at the trades. The reason of this is in the simple and oft-mentioned fact that our country is in the process of making, and that our material development is even more striking and more rapid than our de-

velopment of what used to be called the refinement of professional life. Few will be so bold now as to claim that the advances of the last fifty years in the professions of law, medicine and theology have been as great as the advances in those constructive vocations that have had to do with the material development of the country. The fact is significant, and it manifestly ought not to be disregarded by any one who has to do with the shaping of educational policies.

There is another phase of the matter that is worthy of attention. What has sometimes been called the chaotic condition of our educational processes makes it very late before a student can complete the ordinary college and professional courses of study. The average student of Harvard, for example, will be twenty-six years of age before he is ready to go into an office as lawyer's clerk. He will generally be regarded as fortunate if from that time on he can earn his own support. If dependent on himself, he will be in no condition to marry before he is thirty. The student who decides on a technical course, however, enters upon his professional education when his fellow in the classics goes to college. The result is that the technical student completes his professional training and is ordinarily ready to enter a lucrative profession three or four years earlier in life than his fellow. There is here no intention to compare the two processes of education. Let it be fully admitted that the classical course is the more comprehensive and the more thorough training; yet the fact still remains that the engineer and the architect who have been graduated at twenty-two are quite as near the period of professional income as the lawyer or physician at twenty-six. No comment is made upon the fact; and it is here mentioned only to show one of the most important of those considerations that are filling to overflowing all the technical schools of the country. Notwithstanding the aggregate of wealth that we see about us, it still remains true that a vast majority of our college students are desirous of securing an income as soon as practicable after they complete the twenty-first year.

Granting, then, that the call for technical education is loud and universal, the question confronts us as to what kind of education should be provided. The answer is not altogether easy, for it cannot escape our observation that the demand for skilled artisans is almost as great as for professional engineers and architects. The apprentice is a man of the past. The fact has often been deplored that in various handicrafts the indenture is a thing no longer known. If we seek for competent mechanics of any kind, we come almost invariably upon foreigners; and, when we press our inquiry further, we are assured that the same thing is beginning to be complained of in England, if not in continental Europe. Nor is the fact a very singular one. The handicrafts have been transformed by modern inventions. So many things are now done by machinery that the craftsman finds a very different, if not a much less, call for his skill than his fellow-workman found one or two centuries ago. The fact, therefore, that boys are no longer learning a trade in the old-fashioned way of serving five or seven years has a very natural explanation.

At the same time the question is a pertinent one whether something in the way of a substitute is not called for. Is it or is it not best that the schools should attempt to provide a training that shall take the place of that which was formerly supplied by the guild and the system of apprenticeship? It is not my purpose to attempt to answer this question; but whether they ought or ought not, we shall here, I think, agree that a work of this kind ought not to be done in colleges and

universities. If proper anywhere, it is the work of the primary and intermediate schools; for it is almost axiomatic to say that it must be the logical function of the higher grades of schools to prepare their students for the higher grades of work they will be called upon to undertake.

What are such grades of work? Evidently the time is past when this question could be answered by simply naming three or four vocations that used to be dignified with the word "profession." However it was a hundred years ago, it is certainly the fact now that the architect and the engineer, when they are planning a building, or a bridge, or a machine, are as truly doing professional work as is the craftsman of any other kind who is writing a sermon or determining upon a prescription. The invention of the Bessemer Converter has not simply made immeasurable fortunes, but it has had much to do with revolutionizing the industries in all parts of civilization. It has brought Minnesota and Dakota so near the seaboard that it has completely transformed the agriculture not only of old England but of New England and New York as well. Interests that are so prodigious in their nature can no longer be ignored, and we may as well admit that the professions are no longer simply three or four in number.

This fact, so largely the result of the inventions, has forced itself upon the consideration of all modern educational authorities. Hence it is that everywhere technical schools have been established. They have come in answer to an imperative demand, and we may safely assume that they are established on as firm a basis of permanency as the old colleges and universities.

Assuming, then, that technical education has a legitimate place in the interests of modern educational systems, the practical question confronting us to-day is whether technical education should form a part of a collegiate course. A sufficient answer cannot be given in a few words. We may, perhaps, approach the subject most advantageously by a process of elimination. In the first place, it would seem that the mysteries of ordinary craftsmanship ought not to be taught. In other words, a college or university is not a place in which a man should be taught what is called a trade. While this grade of teaching, as above asserted, belongs to the lower or intermediate schools, the college or university grade is the grade of designers and contractors. If given at all, therefore, in colleges and universities, technical branches should be taught with a view to training those who are to design and superintend the construction of works rather than those who are to perform the *labor of erection*.

There is another consideration that must not be overlooked. President Garfield's famous intimation that a pine board with Mark Hopkins at one end and himself at the other was a good college might be true of a college of a certain kind, but it could not be true of a technical school. Something more than a blackboard and a piece of chalk is needed. Indeed, it may as well be admitted that the equipment of a school where technical instruction is successfully to be given is, in comparison with the old classical school, enormously expensive. The purchase of engines and dynamos and storage-batteries, and the multitudinous instruments of precision that seem to be imperatively called for, make drafts upon a university treasury which would drive the financial committees of many of our colleges to utter despair. To a vast number of our institutions, therefore, the matter is made impossible by the conditions imposed. I say impossible, because

to the great majority of them additional financial burdens seem to be impossible, and because it may as well be admitted first as last that no good education of a comprehensive kind can ever be made financially to pay for itself.

But still there are a few institutions which doubtless could provide the means of setting up technical departments, if the authorities were to be convinced that such departments are really called for. And the answer to this query brings us to the crucial question of this discussion, namely, whether it is better that technical departments should exist as independent institutions, or whether they should be co-ordinated and grouped as distinct parts of one general university system.

The European answer to this question would seem to favor a separate organization, but it will have to be admitted that the conditions in Europe are essentially different from those that prevail here. Their universities are organized on a very different plan from ours. Most of the universities, moreover, were established and had hardened into definiteness of form and method before technical instruction, as a university study, had been thought of. Anybody familiar with the German or English university system will be obliged to admit that the grafting-on of technical schools would, if not so difficult as to be practically impossible, at least be attended with embarrassments which in this country are quite unknown. Beyond this consideration there is also the further fact that in Europe there are much sharper social differences between the several vocations than here. The old mediæval distinctions between classes, though deprived of legal significance during the administration of Stein, still have considerable binding force. It is, therefore, doubtful whether technical studies, even if a way of introducing them could be found, would succeed in making their way in opposition to the caste prejudice that would inevitably greet them in France, in Germany, and, perhaps, even in England. These considerations are so different from any that prevail here that it is difficult to see any reason why we ought to be affected by the theories and practice that there prevail. We shall be obliged to work out our problems in our own way.

And now, coming to the question brought immediately before us, it may be well to consider for a moment both the disadvantages and the advantages of a union of technical and general studies in the same institution.

The first disadvantage that is sometimes urged is that an institution combining general and technical studies will lack something of that professional *esprit* that is necessary to give to the graduates a desirable professional standing. This is equivalent to saying that the graduate of such a school will be looked upon with a sort of suspicion by his professional brethren as having carried on his studies in a school where technical work is a matter of minor consideration. It must be admitted that there is force in an objection of this kind if the technical instruction is not sufficient of itself to be an adequate answer to such an assertion. But where the material equipment is ample, where the instruction is of superior quality, and where care is used in the adjustment of the work, there will be no good ground for any prejudice of this kind. It goes without saying, of course, that without care in the arrangement of the studies and in the supplying of all the needs of professional instruction such complaint would not be without reason. The complaint, therefore, would seem to be against inadequate technical instruction, rather than against any contiguity of such instruction with instruction of a general character.

Another objection sometimes urged is that there is danger of lack of sympathy between technical courses and general courses. Here again the objection is founded upon a condition of relations that ought in no case to exist. Experience abundantly shows that in an American university there is no general prejudice against any class of students that is working upon a high plane of intellectual endeavor and research. Students will always look down upon those whom as a class they necessarily regard as their inferiors; and, if admission to a technical department is very much less difficult than to any of the other departments of the university, there will surely be more or less ill-feeling of the kind mentioned; but where the requirements are substantially equivalent no such prejudice or ill-feeling seems likely to prevail. This has been abundantly shown in the history of Cornell University and of the University of Michigan. To be more specific in the way of illustration, it may be said that the terms of admission as a candidate for a degree in the course in agriculture at Cornell have been very high, and the requirements in the way of study, after the student has secured admission to the course, are as exacting as those of any other course in the University. The consequence has been that, although the number of agricultural students has undoubtedly been less than under other conditions it would have been, still the students of that department of the University have received no less respect from their fellows than those matriculated in the courses in philosophy and arts.

A third element of danger is the fact that the necessary outfit for successful technical work is likely to be crippled by the demands of other departments. There is considerable danger that people will think a university a university, whatever the courses of study that are to be provided for. It is easy to overlook the requirements of the various departments. An observer who is accustomed to think of an institution of learning as one that is devoted to literary or philosophical work alone may be in considerable danger of supposing that the wants of such an institution are substantially the same as those of any other university which endeavors to do several very distinct kinds of work of a similar grade. Although it is undoubtedly true that a university may teach the courses leading to the degrees in arts and philosophy, and also courses leading to various degrees in engineering and architecture, for much less money than would be required for two separate institutions, still it must not be forgotten that we have in such a combination practically two institutions in one. But it will be absurd to suppose that this combination could be made as successful as an institution could be made with the same means which should care for one group of studies alone. In an institution, moreover, attempting to do both classes of work the large requirements for technical instruction must ever be borne in mind; for in such an institution one of two results is likely to make itself felt: either very large amounts will have to be appropriated for technical work, or the technical work will be so feeble as to incur the disrespect of the profession which it is endeavoring to serve.

Another objection arises in a certain apprehension that jealousies are likely to arise between those connected with one branch of studies and those connected with another. It cannot be safely presumed that this danger is altogether chimerical. Every man of educational experience knows that the votaries of each department are inclined to magnify their office, and that their desires for their departments are very seldom completely gratified. The appropriations in a university must,

in the nature of things, be somewhat varied and unequal. It is impossible, for example, to furnish to a department of pure mathematics the same outfit that would seem to be necessary for a department of steam engineering; and, if the professor of mathematics happens to be extremely unreasonable, there may be complaints and friction. The only answer to such a complaint is that no system can be made to adapt itself to the peculiarities of unreasonable men. We must presume upon a general prevalence of that "sweet reasonableness" which must be the basis of all successfully co-ordinated work. But with such a spirit largely prevalent there will probably be found no insuperable obstacles in this consideration.

And now, having glanced at certain supposed disadvantages, let us look at the advantages.

In the first place, I should name as an unmistakable advantage a certain cosmopolitanism that cannot be found in an institution where technical studies are isolated from all others. There is probably no complaint in Germany at the present time so loud and so well justified as that of a too wide-spread tendency to narrow specialization. It would be difficult to go into a German university and talk with the professors on the general tendencies of higher learning without hearing them deplore this general tendency. No doubt it is one that ought to be guarded against. While, of course, it ever remains true that the professional man must learn his profession thoroughly, it is equally true that he will not practice his profession with the greatest success unless he knows also a great many other things. He must know human nature; he must know what is going on in other fields of learning; he must have that breadth of view, that spirit which I have called cosmopolitanism in education, which will take away from him that arrogance that is apt to result from too narrow a specialization. Such an advantage I believe is to be gained from a wise union of technical and general studies. Technical students who daily come in contact with students of another kind, taking certain of their work in the same class-room, meeting them at the same lectures and on the same athletic field, and talking with them in the same clubs and at the same table, are sure to have broader and juster views than they could have if they were to meet with their own fellows alone.

A second advantage is a pecuniary one. A close inspection of the courses of study in any technical school will reveal the fact that a vast amount of work has to be done which is also done in any institution that provides for any one of the courses leading to the old baccalaureate degree. For example, all the pure mathematics, all the instruction in modern languages, even the instruction in physics and chemistry, have to be furnished the students of the general courses; and, although additional instructing force may have to be provided for, it will still be found that the cost of teaching both categories of students will fall far short of being twice as much as it would be if only one class had to be provided for. To give a concrete example, it may be said that at Sibley College, at Cornell University, which is in a very strict sense of the term a technical school, more than one-half of all the instruction given to its students is given by teachers that have no connection whatever with that college, but are employed to teach the mathematics and modern languages and such other studies as are required for students in the other courses.

Other advantages might be named, but enough have been given, perhaps, to

show that, under favorable circumstances, the advantages far outweigh the disadvantages of such a union. But whenever such a union is attempted caution must be practiced. First of all, the pecuniary considerations must be borne in mind. I believe it to be a mistake for any university to establish more courses of instruction than it can generously support. It is not wise to cripple departments already founded by the founding of new ones; and unless, in establishing new ones, new strength can be provided without weakening the departments already doing their work, it is probably better to wait until the means can be provided.

Another question of similar interest presents itself, and ought not, perhaps, to be overlooked or neglected; and that is the query as to whether students in the general courses may with profit be admitted to the classes in technical schools. There are certain courses of instruction which students seeking a non-technical degree might perhaps be profited by taking. There are the courses in the shops, not to speak of the courses in the different kinds of drawing; and a student not infrequently feels that he might here perhaps take his physical exercise and at the same time learn something that would be of advantage in subsequent life. But there are very serious objections to such a course; and, in general, I believe it will be found that the objections will more than counterbalance the advantages. I doubt very much whether it is wise to admit students in arts, for example, to take any of the courses that are purely technical in their nature. These classes of students will doubtless gain the same advantage by coming in contact with the technical men that the technical men gain from a similar contact; but, beyond this mutual advantage, it seems to me doubtful whether either class of students is profited by going very much into the domain of the other. There are certain studies that must inevitably be pursued in common; but beyond these studies, for the most part elementary, a common course cannot profitably be taken. For example, as it is not best for a technical student to spend his time in philological research, a branch of study that with linguistic students may even be regarded as in a certain sense technical; so a student of languages ought not to be encouraged, or even permitted, to dally with the work of the technological departments. Such studies are likely to be pursued in a dilettantish way, and the result will be more or less depressing and demoralizing.

In conclusion, I would express the belief that great advantages can be gained from the union of technological and general studies, provided this union can be brought about under generally favorable conditions; but I see no special advantage that is likely to follow the introduction of individual technical studies into the curriculum of the ordinary college or university.

President Isaac Sharpless, of Haverford College, as Co-referee, read the following paper:

COMBINATION OF UNIVERSITY TRAINING WITH TECHNICAL EDUCATION.

To the future historian of the United States the development of technical education will mark a crisis in its history. The suddenness with which the reverence for the old training was cast aside, the surprising demand for and no less sur-

prising provision for the new, are phenomenal, and indicate a need of the times which the times has had the wisdom and resources to fill. It has been an actual substitution. It has not been that the working-classes have pressed upward and secured schools to assist them in their trades, but that the sons and the younger brothers of the men who have had the old classical course have sought the new, practical one. Trade-schools languish. They are a great need, but the working-men have not had the means, and too few of our capitalists have given their money, to establish them; and, because of this lack, and of the narrow policy of trades-unions in limiting apprentices, our manufacturers have to look abroad for their skilled labor of the highest grade. But our young men who aspired to places on a higher plane than the laborers felt the necessity for technical training. They crowded the schools in which it was furnished, and soon appreciating that to understand the principles they must understand the methods, they have donned the mechanic's garb, and in shop and laboratory are doing mechanic's work as an honorable means to a worthy end.

Soon it became apparent that this system really educated; that it developed mental resources, not quite the same as the classical regimen, but which created men of power and comprehension—men capable of performing invaluable service to the State, and of making for themselves a place in which to do remunerative work.

By and by it was seen that the manual part of the work was not only a means, but that it had an educative value of its own; that for many a man whom the old courses would have rejected it afforded an avenue of approach to his mental powers, and developed him into a man with a mission and a purpose; that it was a real physical and mental stimulus.

Then followed the other idea—the truth of which becomes increasingly manifest as the experiment proceeds—that the education of the eye and the hand is a legitimate factor of education; that the education of the past has been too exclusively intellectual; and so came into being the manual-training schools as a part of our intermediate education—a legitimate result, as it seems to me, of our higher technical training.

I do not know that this was the exact chronological order of the growth of the different branches of the modern education, but I apprehend it has been in other cases than my own the order in which the facts one by one appealed to educators for recognition.

This is not the place to discuss the question of the relative merits of the new and old education. Indeed, it is useless to discuss it at all—as fruitless of results as the effort of some literary society to decide which was the more necessary to the enjoyment of a certain foreign pen-knife in America, that it should have been made in England or that it should have been transported to this country.

In the economy of our civilization we need the products of both systems. We need not fear the too great materializing tendencies of the present. Material progress has always aided culture and religion. A railroad through Africa would do more to give it our Christian civilization than the efforts of all our missionaries without it. The wealth created by the technical graduates will flow back into chairs of Greek and philosophy, and their sons will return to the colleges and courses of their grandfathers.

Insomuch, then, as technical training has established for itself the necessity of a

place in our educational economy, we come to the inquiry, What is its relation to other college and university work? In the absence of any centralized authority to enforce decisions, it may seem useless to discuss such questions. Every institution is and will be a law unto itself, and will do what its means and its constituency will allow. But it may be hoped that conclusions from such a body as this will somehow indirectly leaven the mass of our people and produce some fruit.

The concentration of collegiate courses is a favorite theme with many educational talkers. The twenty-five "fresh water" colleges of Pennsylvania and the thirty-three of Ohio are considered evidences of a ridiculous dissipation of energy and a totally unscientific economic arrangement. If this criticism means that academies, for the purposes of self-glorification, are usurping the name and granting the degrees of colleges, one cannot but agree with it. If it means that in a well-regulated local or denominational college, honestly and efficiently conducted, the real education of a young man is less well attended to, his mental faculties are less normally stimulated, and he graduates with a smaller appreciation of the value of culture and knowledge, and less ability to solve the problems, moral, social, political or material, of our civilization, it is a position which needs inquiry. It is not self-evident. When one goes through the rooms of a great university, notices the vast expanse of appliances and machinery, or reads the long list of teachers in the catalogue, and thinks that all this is available for every student, his first thought is that all smaller institutions should close their doors; and only when he considers further that amount is not always quality, that the mere duplication of resources does not always duplicate advantages, is he sometimes reassured. He reflects that ten instructors for ten sections of a Freshmen class are no better than one equally good instructor for a Freshmen class of one-tenth the size. Fifty lathes for fifty students are no better from an educational standpoint than two lathes for two students. If the larger institution can command the services of a faculty in average quality far above that of the smaller, or if it can secure more machinery of a grade beyond the resources of the smaller, just so far is its greater wealth an assistance; but an extended faculty and great expanse of buildings and equipment are to a certain extent delusive in their appeals to the public. I have sometimes thought it would be suggestive to divide the salary-list of different institutions by the number of students, and find out, so far as this would tell, what colleges really give the most instruction or the most valuable instruction to each student.

What the smaller institutions lack in certain directions they gain in the greater acquaintance and sympathy by which the moral and intellectual influence of the teacher is brought to bear more directly and forcibly on the student.

I have no desire to go into a discussion of the relative advantages of large and small colleges only to point out what may be a modifying factor in regard to one statement of President Adams's paper.

The local and denominational colleges have sprung up in response to a local and denominational demand. They give a certain education to their neighborhood or their sect which the larger institutions could not supply. They kept in line with their greater brethren in the old required classical and mathematical courses, and they felt the throb of the pulse which demanded a change. They yielded not so much because they wished to imitate in their small way as because their constituency went along with the general desire for the new, and they were the creatures,

not the makers, of that constituency. The old graduates came to them and said in effect, "I want my son to go to the old college, but I want him to take a technical course. Can you supply it?" When a succession of these cases had filed past the college *en route* to the technical schools, it is no wonder that it became monotonous and that an effort was made to stop the procession. The fathers did not demand extended appliances: they only asked that the special merits of their own college should be applied to the new course as they had found them applied to the old. They asked that right in their midst, in the surroundings which they valued, they should be able to find for their boys an education of the general nature they desired.

It is not a wonder that the colleges have yielded to the demands of their patrons. Some may have done it unwisely. No one would deprecate more than I holding out promises to the public which cannot be fulfilled, advertising courses which the institution cannot furnish the men or the equipment to do justice to. I would only urge that a small college is abundantly justified in giving technical courses if its resources are sufficient to give capable instruction to a limited number of its own proper constituency. It will thus secure such a course for many who would not otherwise receive it. It will bring to the attention of many ideas to which they would otherwise be foreign. It makes so many local centres for the diffusion of the scientific spirit, and it makes friends and absorbs money from men with whom the distant larger universities would never be in touch. The same reasons which induced men and churches to found colleges at all will in many instances induce them to add technical training to their courses, and the same kind of good which the small colleges have done to communities will be derived from their addition. So long as a body of substantial friends surround each small college and see it through its difficulties, so long will it have a valuable work, though a humble one, to do; so long will it be swung into whatever line its friends decide; and so long will it be improper for any one to say it is not filling its proper place in our educational system.

But the great machinery of the modern technical school is not possible for the average college and the collegiate department of the average university, and it is necessary for the most exhaustive treatment of mechanical questions. The great specialists in technology are also not usually available for collegiate positions. To come into contact with these is important, very important, to the highest success in the pursuit of technical training. On the other hand, the college can teach, just as well as the technical school, mathematics, which is half the battle; French and German, indispensable in every good course; practical English, which every technical graduate should have, whether he wants it or not; general science, taught in laboratories; the principles and practice of drawing, and the use of common mechanical tools. All this it can do, and I see no reason why it should not do it.

My suggestion would be this: Let the colleges and universities which do not risk or cannot afford to have the extraordinary technical appliances in men and machinery, and who yet wish to hold on to their proper constituency, give a course in these subjects, making it honest and thorough, and a little wider in scope than the technical schools give; and then let them knock at the doors of the technical institutes for entrance with their Senior classes, and seek their special advantages, which usually are only freely enjoyed in the last year of the course. If the tech-

nical institutes would grant this as we now grant admission of boys to Freshmen classes—by certificate—I doubt if they would find the graduates of a four years' course in an honest college in any wise deficient in resources to stand beside their Seniors of three years' standing and do efficiently the higher work. They would not be so familiar, probably, with technicalities, but they would be better educated; and time would test—not unfavorably, I apprehend—their capabilities.

I do not believe it can be brought about that the technical schools can so place themselves as to receive the college graduates as Freshmen, as in theory all the special schools should do. I would be very glad if the colleges could feed the universities with students in all their departments. At present the technical schools are the rivals of the colleges, taking boys of no greater maturity. The average American youth wants to get to productive work as soon as possible. Making money assumes in his eyes a greater importance than mental culture. The proposed course is probably the most of culture you can get him to take, and if he takes it he will always be thankful to you.

The colleges should avoid giving technical degrees or holding up to their students or the public the idea that they offer exhaustive courses. Some such simple degree as Bachelor of Science would probably be the proper one for the elementary course in technology with culture accompaniments. On the other hand, we might ask the technical schools to avoid giving the scholarly degrees for special work. A.B. will no longer mean Greek, Latin and Mathematics only; but it ought to mean general scholarship: so ought A.M. and Ph.D.

The course of a boy who preferred a special collegiate course preliminary to a technological degree would then be about as follows:

He would enter the college at 17 or 18, with a strong preparation in mathematics, English, German and French, and some Latin, if you can induce him to bring it up. He would spend four years in a very thorough study of these subjects, along with chemical and physical laboratory work, and work in a machine-shop and drawing-room. He would go out with the degree of Bachelor of Science either to his profession or, better, into the Senior Year of the technical school. Here he would have the use of the special machinery, and come into contact with the great technical specialists, and graduate, if so be that he was fortunate enough so to do, at 22 or 23, with the technical degree which expressed his line of study. Graduate courses could follow or not, according to time and means.

Of course the large majority of technical students will directly seek the technical schools as Freshmen. I only outline the course which might be pursued by a college which did not desire to lose its proper patronage—a course which is an eminently proper one for it to give, and which will produce results of which it will never have cause to be ashamed. Its graduates in science will thank it for giving them the spirit of their own colleges, its broader culture and more congenial associations; and the technical schools should thank it for sending them thoroughly disciplined men to swell their upper classes.

Still the colleges should mainly foster general scholarship and professional rather than technical aspirations. Their first care should be for the undergraduate candidates for the degree of Bachelor of Arts.

It will be a sad day for America if utilitarianism usurps more than its proper place. Many a boy is attracted by the glitter of engineering instruments who

ought to be at languages and literature. The proper balance of ideas demands that the exponents of pure scholarship should not abate one iota of their claims. The colleges are their special working ground, and they must not surrender them unduly to intruders; and one advantage of the method which this paper proposes is that they will be able, in the case of a student who has unadvisedly taken the scientific course, to recover him to the general one. While recognizing that a scientific course may produce a valuable culture, they must make good their title to being the real educators of the American people, and force an acknowlegment of the fact that for all men, whether working for material or intellectual results, their courses are an invaluable preparation. Not because I would weaken these courses, but because I would strengthen them, do I ask for this much technology in certain colleges. It would strengthen them because it would strengthen the colleges themselves by increasing the number of their friends, add to them a spirit which science always induces, and round out their conceptions by the introduction of the manual idea into the curriculum for at least part of the students.

Perhaps my remarks have been unduly confined to collegiate rather than university courses. But what is the difference? If a technical course in a university means a graduate course, and the university have the resources to supply this creditably, very well. If it have not the resources, it will be greatly foolish for it to undertake it; for the matter of resources is not a small one in this connection. If, however, it mean an undergraduate course, then all that I have said applies. The university is doing collegiate work, and if it undertakes this it must be content to be a feeder to the technical institute which owns the great machinery and the great teachers; and if wise it will accept the situation and give a broad course of applied science, with manual training, and send its graduates to advanced standing elsewhere.

In short, I conceive we can give two kinds of technical courses—one broad in its scope, the appliances for which need not be extremely costly; the other special and expensive, and which can be so arranged as to take for one year at least the graduates of the first. The former is properly within the province of the average college or university which has the inclination and means to take it up; the latter should not be attempted by any institution except the very wealthy and exclusively technical.

The same ideas may be applied still more broadly. In the better system of higher education, which is soon to come, many of our colleges will stop the foolish game of trying to rival in standards of admission and complexity of curriculum the few great universities of the country. The universities will push on out of our reach, and we will send our students to their upper classes, for general culture as well as for law and medicine. There is a place for the colleges between the academies and high schools on the one side and the real universities and technical schools on the other. The territory occupied will not be an unimportant one. Its frontier, especially on the upper side, may not for a time be very definitely determined, and excursions across it by either party may occur; but a recognition of its existence will simplify many problems, including the one which is the subject of these papers.

The papers read were discussed by Presidents Fell, Seip,

McCracken, Adams, and Professors Bomberger, Frazier and Lamberton, the drift of opinion tending to the advisability of making technical teaching a University rather than a College work, and of insisting on a large measure of culture study in connection with the technical courses.

Provost Pepper retiring, Vice-Chairman, President Seip, took the chair, and introduced Professor F. A. March, of Lafayette College, who read the following paper on the

STUDY OF ENGLISH CLASSICS FOR ADMISSION TO COLLEGE.

THE practical purport of this paper may be stated as follows:

1. It is desirable that an examination upon the language of two or three English Classics should be required for admission to college.

2. That these books should be of moderate size, not larger than those prescribed for the examinations in Greek or Latin.

3. That the same books should be adopted by all colleges, and continue permanently, so that, for example, "Two books of Paradise Lost and Franklin's Autobiography" might be on the same footing in the high schools as "Two books of the Iliad and the Anabasis."

Resolved: That a committee be appointed by the College Association of the Middle States and Maryland to report two or three English Classics as permanent texts for entrance examinations in the English language.

First Remark. The study of classic authors here aimed at is not all the study of English which should be required in the high school. The mother tongue has very peculiar relations and functions. It is the scholar's true foster mother. There are four principal uses in studying it: 1, to understand what is said in it; 2, to speak it well; 3, to write it well; 4, to master English literature; and there are three remoter ends: 1, scientific mastery of the language; 2, knowledge of language in general; 3, general culture.

The high school teacher should carefully teach good conversational habits, should be a model and censor at once. He should give attention to common errors of speech. Translations from foreign languages are good, recitation by topics is good, so is learning pieces for declamation. There should be much practice in writing, in the kinds of writing students are likely to need—business letters, descriptions of meetings, persons, places, written examinations in school studies, and the like. The study of the masterpieces of literature is more than all this. The language of such masterpieces is not common speech. It is shaped to peculiar forms by men of genius. The main object in the study of it is to rethink the thoughts of those men of genius. This is the richest birthright of a cultivated race. The youth who, if they had no classic speech, could do nothing better than tend machines, or watch birds and bugs to snare and kill them, can, by means of speech, rise almost in childhood to the highest thoughts of all the ages before them. It is the best birthright of an American to think the thoughts of Washington, Franklin, Webster, Newton, Milton, Shakespeare, Chaucer, and the Bible.

This study, the study of literature, is the study which this paper proposes. And it urges a particular kind of study of literature.

Second Remark. One way of studying the great masterpieces is by rapid sympathetic reading. A teacher who feels the beauties of a passage will read it with expression, will direct attention to beautiful thoughts, figures and idioms, quote similar passages, perhaps, from other authors, tell anecdotes of admiration, and repeat admiring criticism, have choice passages committed to memory, and repeated with feeling. Such appreciative reading, comment and memorizing may be made a delightful introduction to literature, and to some biographical and bibliographical knowledge of authors and books.

I suppose such is the purpose of those colleges which publish lists of novels, poems, literary essays and the like, changing each year, upon which they require examinations. They mean to promote the reading of good books in the schools above board instead of under the desks, as they used to be read. This is all good. It is certainly good as listening to music is good; it makes one feel good. But it is only preliminary to the thorough study intended in this paper, which is aimed at in the provision, that the books for examination shall be of moderate size and few in number. The purpose is to have the books studied word by word, clause by clause, sentence by sentence, as the Greek and Latin text-books are studied in good schools—each word studied etymologically and in its connection so as to comprehend its meaning, each clause and sentence studied in its connection so as to repeat the train of thought of the author. Knowledge of English consists mainly of knowledge of the precise meaning of words, in distinction from knowledge of grammatical forms. The grammatical forms are few in number and their uses simple. Mistakes in speaking or writing English are usually mistakes in the meaning of words, either in their general meaning or in the denotation, the particular objects to which they may be idiomatically applied.

Few persons except teachers of English in colleges have any adequate notion of the rareness of accurate knowledge of the meaning of English words. I heard for years the same class, college juniors, in the same term, in a play of Shakespeare and a Greek classic, and I found they made more mistakes about the exact meaning in English than in Greek. And, after all, that is what one might expect, because they never had been taught the meaning of the English words. We pick up English from the first. Nobody defines words to us. We gradually get the denotation of names of common material objects and acts somewhere near right, but often we cannot define them. I have seen persons at a Thanksgiving dinner unable to discriminate pie and pudding, and learned persons often criticise athletic contests who do not know the difference between walking and running. Mere abstract terms and names of complex conceptions and idioms float vaguely in most minds, having such notions attached to them as the words with which they are usually connected suggest.

Our habit is to hear and remember the words of a sentence without thought till the sentence is complete, and then perhaps make up in the thought a very general result, which neglects half the words.

There is no more delightful discipline than that of clearing up these vague notions, defining them and nailing them down with their words, so as to make the scholar confident master of his thought. This is the work of a Socrates.

It is the preparation for all progress in advanced thinking, or for original writing. There is much talk about reading Latin and Greek as we do English. There ought to be more about learning to read English as we do Greek.

It is sometimes objected to verbal study of classics that it destroys our love of them; and there is teaching to which the objection applies. But it is certain that for profound and worthy love and admiration, minute and profound study, long continued and often repeated, is the great need. Philological study, used as means of clearing up, enriching and impressing the thought and the merits of the style, instead of making students hate the authors studied, makes them rejoice in them and remember them forever. "What a treat it would be to teach Shakespeare to a good class of young Greeks in regenerate Athens," said Dr. Arnold; "to dwell upon him, line by line and word by word; and so to get all his pictures and thoughts leisurely into one's mind, till I verily think one would, after a time, almost give out light in the dark, after having been steeped, as it were, in such an atmosphere of brilliance."

Third Remark. It is suggested that the same books be used year after year. Many bright young teachers object to this. They like a fresh book every year. Perhaps this is a good way to tell which schoolmasters like teaching and which like reading new books. To go over and over the same author is very desirable, if the teacher is a true teacher, loving and studying the mode of imparting, of making scholars think the thoughts of the author. He will accumulate illustrations, see new beauties, see what to emphasize, what difficulties to remove, gain prompt and vivid expression, just as an orator or lecturer does, or a teller of good stories. The teacher has a fresh audience in each new class. Again, if the books are permanent, the best books will be likely to be chosen. Excellent editions will be prepared by eminent teachers, with the best notes and other apparatus. There is said to be dense ignorance of good methods of teaching English. Teachers, like other persons, are imitative. When definite permanent courses are established, great teachers will propagate themselves, and excellent modes of teaching will become traditional in English just as they are in Latin and Greek.

Professor Allen Marquand, of Princeton College, presented the following paper on

COLLEGE STUDENTS WHO ARE NOT CANDIDATES FOR A DEGREE.

Our American Colleges are in general established upon the model of a four-years' course of study, more or less prescribed, leading to the first or Bachelor's degree. But, almost without exception, we admit to our numbers students who are not candidates for a degree. This is found to be the practice of our Law Schools and Medical Schools, as well as in the Scientific and Academic departments of our Colleges. On the one hand, these students are slighted as if they had no share in our intellectual aristocracy—on the other, they are honored as a class from which have frequently risen most proficient scholars. These differing points of view are illustrated in the policies of two of our oldest colleges. At Yale College such students are excluded altogether. President Dwight writes: "We have

never had such special Academic students and have never been disposed to have them." And again: "I think the special and short course men demoralize the others more than they benefit themselves—the College that keeps to the regular and full course will accomplish the best work." In these words there is no uncertain sound. Special students are regarded as an evil, and against them the College doors are closed.

At Harvard College special students have been admitted for nearly a century. President Eliot writes of them in 1881 (Report 1880–81, p. 18): "The category naturally includes a considerable variety of persons; but the great majority of the students who have belonged to it have been desirable members of the University, and some of them have been young men of unusual power and merit. Increase in the number of these special students will not only add directly to the influence and usefulness of the University as a teaching body, but will also have an indirect effect of perhaps equal value. If all competent young man can freely pursue here the studies of their choice on equal terms with any other students, the University does not refuse to give instruction when it maintains rigid requisitions for its degrees; it only denies these traditional testimonials to persons who do not fulfil all the prescribed conditions."

It is not without interest, therefore, that we inquire into the Academic status of these undergraduates.

If we refer to the catalogues of various Colleges we find such students admitted under various names. They are called *Specials* at Harvard, and by this designation they are most frequently known. They were so named, doubtless, because at first they formed a special class by themselves, distinguished from the great body of undergraduates by the pursuit of other studies or of a special modification of the regular course, which rendered them ineligible to the Bachelor's degree. It is interesting to notice that they were first admitted to Harvard College in 1825 in response to the demand felt for a scientific as distinguished from a classical education, and that after the establishment of the Scientific School in 1847 all the members of the school were designated as "Special Students" in the annual catalogue, and that no degrees were offered in that school until 1851. So rapid, however, has been the development of scientific education in this country since 1850, that the Massachusetts Institute of Technology can now offer the B. Sc. degree for the successful accomplishment of any one of ten different curricula of four years each. Several other of our institutions have developed their scientific courses to nearly this extent.

If we look beyond the border line of the country to Dalhousie College, at Halifax, we find the same body of students designated as *General* Students, doubtless so named because they do not follow the special curriculum prescribed for a degree; if we look to the South, they are called *Optional* students at the University of North Carolina, *Elective* students at South Carolina, and *Irregulars* at Texas. At Brown University they are known as *Select* course students; at Williams and the University of Pennsylvania as *Partial* course students; at Union as *Eclectic* course students, and at Bryn Mawr the junior students of this class are designated as *Specials*, while those who have reached twenty-five years of age are known as *Hearers*.

This diversity in the names which are applied to this body of students is a sig-

nificant fact, since the Colleges which give the B. A. degree are almost unanimous in naming as Freshmen, Sophomores, Juniors and Seniors, the successive classes of regular students. In the University of Michigan we find the undergraduates broadly classified as Candidates for a degree, and Students not candidates for a degree; and in the Johns Hopkins University these two classes are further subdivided—the first into Matriculates and Candidates for Matriculation, the other into Specials and Preliminary Medicals. But this subdivision of classes is exceptional.

This diversity of names is but one indication of the real diversity in the character of the students who are found in this class. Into what class would we put an elderly gentleman who wished to supply the deficiencies of a neglected youth? If not a graduate, he would be classed as a special. Into what class do the faculties place men of poor health, or of imperfect preparation, or of tastes too strong in particular directions to permit of their successfully following the set courses which lead to a degree? These also are classed as specials. What is the class to which undergraduates are looking with ever-increasing interest for giants at foot-ball, base-ball, and athletic games? This is frequently also the class of special students. Into what class would a student go who could not afford to spend four years at college, but who wished a briefer period of training preliminary to a professional career? If admitted at all, at most of our colleges he too would be classed as a special.

It is evident, therefore, that the age attainments and aims of special students vary so widely as to make it important that the heterogeneous class of specials should be subdivided. Some, but not many, of our institutions have attempted such a classification, and by so doing they not only obviate some trying difficulties in collegiate discipline, but go further to meet the educational demands of the country, which it is the privilege of our colleges to supply.

In the absence of anything like uniformity of practice in this direction I venture to propose a system of classification which combines important elements already existing in various institutions. Taking into account the differing aims of undergraduate students who are not candidates for a degree, they fall into three classes:

(1) General students.
(2) Special students.
(3) Short Course students.

I. *General Students.* This division now constitutes the majority of the class under consideration. They are men who wish a general education, but by reason of defective preparation or some misfortune are unable to matriculate without conditions; or having matriculated, are unable to follow successfully the defined curriculum. This inability is not always culpable, and in many instances such students have made up their deficiencies and passed with credit into the regular classes. In his report for 1887–88 President Eliot gives the statistics for the six academic years from 1882–88, in which it appears that 84 specials during that period had been transferred to the regular classes:

1882–83	10
1883–84	9
1884–85	6
1885–86	14
1886–87	15
1887–88	30
	84

And every college which has dealt carefully with this class of students has had more or less of this experience.

General students should be subject to some such regulations as these. They should not be younger than the candidates for a degree, should pass examinations preliminary to the courses they intend to pursue, should fill out a schedule for the same number of hours as regular students, should be credited with examinations passed, and receive every encouragement to become candidates for a degree. Scholarships and prizes should be open to them on almost the same terms as to regular students, and certificates and final honors given them for high grade of scholarship. As this class of students will stand in need of special guidance in the arrangement of their studies, they should be placed under advisors or under a special committee from the faculty.

II. *Special Students.* This class consists of maturer students — usually such as have attained their majority — whose purpose is to pursue some special line of study or a few related branches. Such special study may be designed to fill a gap in their previous training or be directly related to their vocation in life. This class will consist usually of serious-minded men with a definite purpose. That purpose should be stated to the proper authorities and the subjects they intend to pursue be duly registered. No such regulations will be necessary as are indicated for the previous class. Scholarships, if offered to this class of students, should be given only in cases of extraordinary talent.

III. *Short Course Students.* There are many students in our schools of Law, Theology and Medicine who are not college graduates, because they could not afford the time required to complete a full college course. Such students are now forced to enter the professional schools with an ill-regulated preparation. Several of our colleges have established a two years' course preliminary to the study of medicine. Why may not this practice be extended and two years' courses arranged for special students directly preliminary to the work of the Law School and Theological School, and also to the pursuit of Literature and Journalism, for the career of a Teacher and to Commercial Life? Such courses would involve little more than the mere organization of what is already given in our colleges, and would materially assist and encourage a worthy class of students. It need not be feared that such courses would draw away students who would be applicants for degrees; they will rather attract students who otherwise would not come to college at all. Between the regular college graduate who has worked three or four years for his Bachelor's degree and the preliminary medical or theological student who remains but two years and receives no degree, there will always be sufficient distinction in favor of the former. The liberty in the selection of his studies is now so great for the regular student during the last two years of his course that he also may pursue such studies as are directly preliminary to his profession without losing his Bachelor's degree. The introduction of such courses, therefore, will only add new lustre to the college degree and at the same time be a direct benefit to our professional schools.

Having indicated that mode of classification which, we believe, would materially benefit the cause of special students, we proceed to inquire into the status which such students actually hold in our colleges.

I. What is the proportion of specials to regular students?

During the last academic year there were:

	SPECIALS.	REGULARS.
Yale College.		
Academic,	0	688
Scientific,	8	300
Princeton.		
Academic,	41	422
Scientific,	19	92
Harvard.		
Academic,	145	1,035
Scientific,	29	6
Columbia,	38	227
Cornell,	178	788
University of Michigan,	130	629
University of Pennsylvania,	76	251
University of California,	106	241
Johns Hopkins,	41	85

That is to say, at Yale special students are as rare as 1 in 100; at Princeton they are common as 1 in 8; at Harvard and Columbia as 1 in 7; at Cornell and Michigan as 1 in 5; at the University of Pennsylvania as 1 in 4, and at the University of California and at the Johns Hopkins as 1 in 2.

An average of twenty-five colleges in the Middle States shows the special students amount to one-sixth of the whole number.

From the scale we have given with Yale College at one extreme and the Johns Hopkins at the other, we can see that the actual numerical ratio of students in these institutions who are working without reference to a degree is no small quantity. We conclude, then, the number of such students who are ready to be admitted to our colleges is sufficiently great to make the problem of their education of considerable importance.

II. We need further to inquire into the quality of special students. What are they accomplishing in our colleges? May it be said of them in the strong language of President Dwight that they are demoralizing the others more than they benefit themselves? Such indeed may be the case when the attention of educators is not directed to their improvement, but the very reverse appears to be true when the work of special students is properly regulated; and their accomplishment is greater than is usually supposed. We extract the following from President Eliot's Report for 1883–84, p. 29:

"On comparing the scholarship of the fifty-two special students who made a record in 1883–84 with the scholarship of the Freshman class in the same year as exhibited in the annual rank-list, it appears that of the

Special Students	8	per cent.	earned an	average	mark of	90	per cent.	or over.
Freshmen	5	"	"	"	"	90	"	"
Special Students	17	"	"	"	"	80	"	"
Freshmen	16½	"	"	"	"	80	"	"
Special Students	27	"	"	"	"	70	"	"
Freshmen	37	"	"	"	"	70	"	"
Special Students	63	"	"	"	"	50	"	"
Freshmen	77	"	"	"	"	50	"	"

That is, there was a larger percentage of very good scholars among the special students than among the Freshmen in 1883–84 and a smaller percentage of fair and passable scholars. They had the great advantage over the Freshmen of choosing their studies."

A similar estimate of the quality of special students of the Scientific School at Princeton shows a similar result. In the following table the status of the Specials is compared with that of the three classes Freshmen, Sophomores and Juniors taken collectively.

Regular Students:

	NO.	PROPORTION.
Grade from 90–100	4	.07
" " 80– 90	17	.30
" " 70– 80	19	.34
" " 60– 70	9	.16
" " 50– 60	7	.13
	56	1.00

Specials:

	NO.	PROPORTION.
Grade from 90–100	3	.18
" " 80– 90	2	.12
" " 70– 80	4	.23
" " 60– 70	7	.41
" " 50– 60	1	.06
	28	1.00

From this it will be seen that the proportion of high-stand men, graded from 90 to 100, is larger among the specials, and the proportion of low-stand men, *i. e.* 50 to 60, correspondingly smaller, but that the average standing of the regular student is somewhat higher. The actual status of the special student is doubtless a little higher than these figures indicate, as there is a natural presumption in favor of the regular student receiving a higher grade.

In the Academic departments at Princeton it is very difficult to compare the standing of special with that of regular students, as they are not ranked in accordance with the same system. But it is safe to affirm that the average standing of special students is below that of the regulars.

This is perhaps the experience of many institutions—namely, that though a small number of special students may distinguish themselves, nevertheless the class as a class is a drag upon the improvement of the regular students.

What, then, shall we do? Shall we take the heroic measures of Yale College and rid ourselves of the whole class of specials, good and bad alike, or shall we not rather, in the spirit of Harvard, direct our efforts to their improvement?

We have already indicated some of the ways by which the condition of these students may be improved. They should be classified according to the objects which they have in view; their status should be assimilated as far as possible both in discipline and in privileges to that of the regular student, and every encouragement should be offered them to improve their own condition. Of all the efforts which have been made for this class of students at Harvard, the most effective has been the institution of a committee of the faculty whose function it is to supervise them. This committee began their good work in 1886, by ridding the College of the drones, and directing more carefully the energies of the workers. Since this careful supervision both the President and Dean in their reports testify to the sensible improvement which has resulted in the quality of special students at Harvard.

A similar Committee on Specials has been organized at Princeton and have

begun their work of supervision in a thorough manner. It may be confidently expected that we shall meet with similarly encouraging results.

In conclusion it may be said that whenever a definite curriculum is arranged and entrance examinations are required, sooner or later will be felt the demand for admission by students who for one reason or another need a slightly different form of education from that which is supplied. The practice of admitting special students to our colleges is now so universal that no argument in its defence is necessary. Even at Yale we see them admitted to the Law School and to the Scientific School, and the time will doubtless come when the fence which excludes them from the Academic grounds will also be taken down. But while we do not need to defend ourselves for this wider extension of the facilities of education, we may need to condemn ourselves, if, having admitted special students to our classes, we have treated them with neglect.

Let us not put barriers in their way, but so adjust our college organism as to facilitate their progress. Let us organize them, care for them, improve their intellectual quality. If we fail to do this, they will certainly "demoralize the others more than they benefit themselves."

Provost Pepper having resumed the chair, President Seip said:

"MR. CHAIRMAN:—With your permission I wish to discharge a friendly duty that was laid upon me by President E. H. Magill, well known to those who have been active in the organization of this Association as the originator of the movements which led to its formation. Associated with him as I have been from its beginning, in its Executive Committee, he has especially charged upon me, in this his first absence from our sessions, to present his regret that in consequence of his sojourn abroad he is not able to participate with us in the proceedings of this Convention. In this connection, as best expressing his sentiments, permit me to quote his own language: 'I regret my enforced absence from the meeting of the College Association at the University of Pennsylvania in the fall. I want thee to take charge of the proper expression of my regret, and of my unabated interest in the Association. Assure it of my hearty coöperation again after my return, for I believe it is destined to accomplish a great work for the colleges of this country.' Mr. Chairman, if it meets with the views of the Association, I suggest that the Secretary make suitable answer to Mr. Magill, assuring him of our high consideration and best wishes for his welfare abroad and his safe return home."

It was so ordered by unanimous vote.

The Convention then adjourned for lunch in the University Dining Hall.

AFTERNOON SESSION, Friday, Nov. 29, 3 o'clock.

The Convention re-assembled, President C. K. Adams in the chair.

Professor Jerome Allen, of the University of the City of New York, read the following paper on the

RELATION OF PEDAGOGY TO THE UNIVERSITY.

IN his address before the officers of the University of the City of New York, on last Founders' Day, Dr. Philip Schaff said: "Universities are institutions for the cultivation of every branch of knowledge human and divine to the highest attainable degree of perfection. They are centres of the intellectual and literary life of nations, the workshops of learning and research, the nurseries of the men of power and influence in the various professions." This statement is historically true. The enthusiasm of learning not only originated universities and continued them, but the culture of the nineteenth century has enlarged their sphere of work, and is leading them to offer opportunities for the cultivation of all branches of knowledge to their "highest attainable degree of perfection." A fully equipped university has hitherto required four faculties—theology, philosophy, law and medicine—each of which has granted degrees and licenses to teach in its department. It has been a republic of letters sustained by a body of scholars, adapting itself to the spirit of the times and the needs of the people. Thus the great schools of Athens, Alexandria and Constantinople gave opportunities for studying all of arts and science then known. Universities that have done their proper work have kept themselves in close sympathy with the spirit of the age, and thus have supplied the scholastic demands made upon them. In following out this spirit, many of our colleges have increased their courses of study, and are offering instruction in branches not thought of a hundred years ago, realizing the fact that a school exercises its proper function when it goes before those who wish to become scholars, and incites them to high attainments in all branches of study. It is in doing this work that universities are now giving special attention to pedagogics. This has come because our ablest scholars are convinced that nothing demands more thorough study than the principles and practices of teaching. The problem of education in this country is a problem of life, that cannot be left to uncultured minds to work out. The profession that trains citizens is of such importance that it should receive as much support from the universities as theology, medicine and law; for the teacher has a power never before possessed in the history of the world. Many colleges have seen this fact, and, in arranging their courses of study, have adapted themselves to the demands that society is making upon them. It is on account of the necessity for this enlargement that several colleges and universities in America and many universities in Germany, Scotland and England have provided special courses for the study of pedagogy.

In doing this it has been assumed by some schools that it should be an optional course in the department of arts and science; but a little attention to the studies a professional teacher should master will do much toward settling the place it should occupy in an outline of work.

Outline of work for a school of pedagogy as a department of a university co-ordinate with the schools of law, medicine and theology:

I. History.	1. Of the forces and factors of educational history of all ages. This necessarily includes the history of civilization. 2. Of special school work; of elementary, secondary and university education.
II. Philosophy.	1. Psychology, including psycho-physics. 2. Metaphysics. 3. Application of psychology to education, including the study of the facts and laws of mind as observed in children, and laws governing educational processes, ancient and modern.
III. History of Philosophy.	1. Ancient and modern philosophy, including contemporary theories.
IV. Ethics and Religion.	1. Types of ethical theory. 2. Means and motives of religious culture. 3. A practical system of ethical culture suited to unsectarian schools.
V. Political & Social Economy.	1. Application of accepted principles of these sciences, in rules governing school systems, laws, regulations, programmes, courses of study in graded, ungraded, private, trade, and manual training schools, also school disciplines. 2. School law, ancient, mediæval and modern, with outlines and criticisms.
VI. Methods.	1. General principles under all teaching. 2. Special principles applicable to the presentation of each of the subjects taught in our schools.
VII. Anatomy, Physiology & Hygiene.	Applied to the laws of promoting school health, such as construction of school buildings, light, heat, ventilation, school diseases, gymnastics, length of sessions, amount of work, contagious diseases, etc.
VIII. Experimental and Practical Work.	1. Original investigations concerning methods, processes, and devices of school work. 2. Original investigations of the laws of mental growth and the mental, physical and moral development of children. 3. Reports and theses for review or publication. 4. Criticism of school work.
IX. Critical Study of.	1. Systems of administration, national, state, county, city, and private in all nations. 2. Standard classical authors. This includes the careful study of (1) Xenophon's Cyropædia and (2) Memorabilia, (3) Plato's Apology, Crito, Phædo, and the Republic. (4) Aristotle's Rhetoric, Ethics and Politics. (5) Cicero's *De Oratore*. (6) Quintilian's *Institutiones Oratoriae*. (7) Plutarch on the Education of Children. (8) Rousseau's Emile. (9) Pestalozzi's Leonard and Gertrude, and Evening Hours of a Hermit. (10) Locke on Education. (11) Ascaham's Schoolmaster. (12) Milton's Tractate on Education. (13) Montaigne's Essays on Pedandry, and Education of Children. 3. Recent standard works, including educational periodicals. 4. Special schools for professional training, including normal schools, institutes, training classes, etc. 5. An ideal school system, including a study of the relation of the Church to the State system of schools.

Note 1.—Enough is here outlined to occupy the entire time of a thoroughly prepared student for two school years.

Note 2.—In addition to instruction given by the Faculty of the School of Pedagogy the professors in the department of science and arts should each give several lectures on methods of presenting their subject.

Note 3.—This is an ideal which no one has yet attempted to realize, and which, when attempted, must doubtless undergo modifications.

Note 4.—For the past two years the University of the City of New York has offered a portion of the above courses to its graduate students, especially I, II and III. It has also provided courses of lectures on these subjects for non-matriculants.

This curriculum is an object-lesson that speaks for itself. Yet it may be profitable to notice two points. First, the testimony of those who have given this subject careful study. Dr. H. W. Payne, the first professor of the science and art of teaching in the University of Michigan, says: "From what I know of the present state of educational science, and from what physicians have told me of the present state of medical science, I am convinced that there is a larger body of valid scientific truth within reach of the teacher than within the reach of the physician." Mr. Herbert Spencer says that "the subject which involves all other subjects and therefore the one in which training should culminate, is the theory and practice of education" ("Education," p. 163). But in deciding the place this branch should take in the work laid out for university scholars, it is obviously as improper to compare its disciplinary value and practical importance with conic sections, the calculus, Latin, Greek, or geology, as it would be to place materia medica, surgery, or constitutional and common law in such a light. While it is necessary for all students to know something about anatomy, physiology, the laws of life and health and the causes of disease, and also the fundamental principles of law, yet these subjects cannot be studied in so scientific a way in college as to make graduates either doctors or lawyers. The principles of teaching may be taught, as much as time permits, but such study should no more prevent the mastering of a professional course in pedagogy than would the study of anatomy and physiology, or the elements of law prevent any one from attending either a law or medical college.

The next point to be noticed in this curriculum is in reference to the definition of education itself. If we adopt the view of Pascal, who "regards the entire succession of men in every period of the world as one man always living and incessantly learning," or a writer in "Essays and Reviews," who defines it as "the power whereby the present ever gathers into itself the results of the past, and transforms the human race into a colossal man whose days are measured by generations," we must conclude that thoroughly to appreciate the scope and power of education would require more knowledge than has ever yet been possessed by any human being. President Patton, of Princeton, in his address before the New York State Teachers' Association, in Brooklyn last summer, expressed the same thought. He said that "education is simply the efforts that we individually make to realize in the case of the individual what has already been realized in the case of the race." And again: "We intend to do all we can to have that child realize in his own experience, and embody in his own personal life, as much as possible of the great civilization which the race he belongs to has already attained, through the agency of inspiration and instruction." In other words, our desire is to have that child in the microcosm repeat the story and conform to the life of the macrocosm. If we adopt this view of education, enough will be found under the first division of this course to occupy the study of a good scholar for some time.

The mastery of the substance of the work here outlined has received the approval of the highest authorities in Europe and America. J. G. Fitch, LL.D., in his lectures in the University of Cambridge, 1880, said: "The great function of the university is to teach, and to supply the world with its teachers. The very title of Doctor, which marks the highest academic distinction in each of the

faculties, implies that the holder is qualified to teach the art he knows. The experience of these later times has brought home to us the conviction that the art of communicating knowledge, of rendering it attractive to the learner, is an art which has its own laws and special philosophy. It is surely fitting that a great university, the bountiful mother, whose special office is to care alike for all the nases of human culture, and to assign to all arts and sciences their true place and relation, should fill an honored place for the master science—a science which is closely allied to all else which she teaches—the science of teaching itself."

The Convocation of the University of the State of New York said in 1883: "The philosophy and the art of teaching are as applicable to the advanced departments of instruction as to the elementary. The teachers of academies as much need systematic education into the best methods of their duties as do the teachers of common schools into those peculiar to them."

Ex-President Hill, of Harvard College, in a former paper on "The Study of Didactics in Colleges," urged that normal schools should be attached to our universities, and bachelors of art who intend to teach should be urged to take one or two years' special instruction in the art of teaching."

Dr. Fitch, in his lecture just referred to in the University of Cambridge, said that "if the schoolmaster is to become something more than a pedant, to know the rules and formulas of his art and at the same time estimate them at their true value, it is to the university he must look for his guidance, and it is from the university that he should seek in due time the attestation of his qualifications as a teacher, because that is the authority which can testify that he is not merely a teacher, but a teacher and something else."

Professor Edmund J. James, of the University of Pennsylvania, in an address before the Philadelphia Social Science Association on "Chairs of Pedagogics in our Universities," and to which we are indebted for several references in this paper, said:

"The establishment and proper equipment of these departments will give teachers a better opportunity to prepare themselves for their occupation, and tend to raise it to the rank of a learned profession; it will further the very purpose for which our educational institutions exist, and last, but by no means least, will result in a wide extension of human science, which is itself one of the chief ends of humanity."

Vice-Chancellor MacCracken, in his annual report to the Council of the University of the City of New York, 1888, said:

"Never was there a better opportunity for teaching teachers the very best philosophy that opens now before this corporation. If this school be organized with the courses of study that it should include; if these courses be given with the greatest thoroughness and skill; if the students be properly tested by examination, and an average of one hundred and fifty teachers be secured to attend from year to year, it will become a power with the higher grade of teachers in the surrounding population which may well be cherished by us."

Rev. R. H. Quick, formerly lecturer on pedagogics at the University of Cambridge, has said that "the best thing the universities can do for schoolmasters is to employ some of the keenest intellects in considering education on the side of theory and in teaching such principles respecting it as have been or can be established."

J. M. D. Meiklejohn, professor of the history, theory and practice of education in the University of St. Andrew's, says: "What can the universities do for education? A university is the place for study and research; but it is also a place for distribution. Professors of education stand for method and methods, for a careful search after the new, and a frank criticism of the old, for first-handedness in thought, culture and knowledge, for fidelity in distribution, for the introduction of the growing and receiving mind to all that is best in art, in science, in history, and in expression."

Dr. Stoy, lecturing professor and principal of the training college at the University at Jena, says: "All attempts at German universities to train masters without the strictest discipline have been either without satisfactory results or absolutely fruitless."

Under Dr. Stoy teachers have been trained for more than twenty-five years in the college connected with the University of Jena-Saxe-Weimer, a college long since founded and attached to the university, and re-organized in 1876 by the government. A large number of masters, principals and inspectors in Germany have gone forth from the Jena Training College.

In the recent meeting, October, 1889, the New England Association of Colleges and Preparatory Schools, Mr. J. B. Sewall said: "Teaching has now become a profession. Why ought not the university to make provision for it as much as for business, journalism or agriculture? Harvard has a divinity school, a law school, a scientific school, a medical school, a dental school, a school of veterinary medicine, the Bussey Institution for Agriculture, but no provision for instruction in the science and art of teaching. Teaching has now become a profession; why ought not the university to make provision for it?" In discussing this paper, Prof. Poland, of Brown University, said: "The ability to teach should be conveyed in some formal way, yet it is true that the special training should follow the Bachelor's degree." President L. Clark Seelye, of Smith College, said: "The universities must and will provide for professional instruction in teaching, as in law, divinity and medicine. Let us demand the maintenance of a thorough professional school for teachers of the higher grades." President Dwight, of Yale, favored the proposition of giving more attention to the subject of pedagogy.

A volume could be filled with testimonies such as these, but enough has been presented to show the estimate in which this work is held by those who have had the best opportunities of judging of its value.

It is evident that such a school as is here proposed would be attended by those who expect to make teaching a life-work. Thus it would create a profession of teaching, which though small at first would soon grow by the forces within itself. The influence that a body of thoroughly trained teachers would exert upon the schools of the country would be difficult to estimate; but, more than this, it would bring our highest schools into such immediate contact with the lower schools that they could powerfully direct the thought and method adopted in them.

The recognition those who complete this work might receive should be left to each university to determine, whether in the form of degrees or diplomas, or certificates without degrees. This is not an essential matter, yet a degree is nothing more than a certificate so much abridged and compressed as to be used on all occasions. A B.A. is but a certification that its holder has passed through his

college course with the approbation of the faculty. It is only a convenient way of publishing this fact. It matters not whether one who has completed the course in pedagogy should condense the statement of the fact in as small a compass as possible or be authorized to write B.P. after his name. It is not only the duty but the privilege of the college to acknowledge the satisfactory completion of the work it prescribes. And as the circle of sciences enlarges, the number of certificates, diplomas or degrees must increase. The cheapening of degrees has come about because so many have been bestowed without merit, not with merit. If a hundred scholars should prove themselves worthy to hold the degree of LL.D. after the most searching examination instituted by the best university in this country, it would not degrade that school to give all of them this recognition at one commencement. It would indicate a high standard of learning in that university. But it would degrade that school to invest one man with this honorable title who was unfit to wear it. Something below fitness has degraded academic titles in this country. And this is seen not in the number but in the character of the men who hold them.

Now, granted that what has been said is true, are not the means of pedagogical instruction already sufficient? Is there any field to occupy that is not already taken? Should not the State be relied upon to afford such opportunities as our best teachers want? This is not the time to discuss how much higher education the State should be expected to furnish. Our State normal schools are professedly elementary institutions, of necessity required to devote the most of their time to giving academic instruction to beginners. Not two generations ago we received the idea of the normal school from Germany, and to-day the problem of its exact place in an educational system is not fixed. Professor Parr, of the Depaw University, said last year that "the normal school as now realized is such *in posse* rather than *in esse*." President Grey, of the St. Cloud (Minn.) State Normal School, showed in a paper before the National Educational Association, 1887, that "scarcely a single feature of normal school work is generally agreed upon. Forty-seven terms are used to designate various courses of study, ranging from Greek and Latin, horizontally through law, medicine, art, surveying, book-keeping, and almost everything else. There is equal diversity of opinion about what constitutes method, psychology, observation, practice-teaching, and the use of Kindergarten and training schools." Professor Parr said before the normal school section of the National Association, 1888: "In possibility, the professors of the several chairs in a normal school are specialists of a high order, who are experts in giving that view of the subject which is the necessary antecedent of the conscious teaching of it: in actuality, the teachers in most of them are young people, often lacking in experience, who are not above the average teacher in the middle third of our high schools. In theory, the student entering the normal school is a master of the academic knowledge he is to teach, and comes to its halls to acquire a distinctive training not to be found in any kind of academic school; in fact, the great bulk of students who enter the normal school in this country are not more than sufficiently qualified to pass the test of a good eighth grade." The truthfulness of this opinion will not be questioned by any one who is acquainted with our State normal schools. That they are doing all they are able must be admitted, but that they are doing distinctively professional work will not be claimed. They are

not schools which a good scholar would attend in order to qualify himself to become a professional teacher. Universities must maintain professional schools which scholars may attend. History shows that here is the proper source from which such special departments ought to originate if they are expected to do effective work.

In reference to the relation between pedagogical work in colleges and normal schools, President G. Stanley Hall, formerly of Johns Hopkins University, has said that "the distinction between the department of pedagogics in the university and the work of the normal school should be kept clearly in mind. If university training in pedagogics be sound and strong it will make itself felt in the work of the normal schools; nevertheless the two are sufficiently removed from each other in character and purpose to prevent waste of resources and confusion or antagonism of effort. In Germany the training school, on one side, and the pedagogic departments of universities, on the other, have full development. In Great Britain it is coming to be more and more clearly recognized that both are alike essential in maintaining a high standard of excellence among teachers, inspectors, and other officers directly engaged in the service of education."

Our schools need teachers well trained and equipped. It is true that the demand for them is not as great as could be wished; but President Adams, of Cornell University, very pertinently asks: "What more promising method is there of changing public opinion than by the professional teaching of pedagogy in our colleges and universities?" From what place can uplifting come except from above? It is vain to expect our lower schools to influence the methods or practices of the higher schools to any appreciable extent, but well-trained bands of competent teachers would soon create a public sentiment that would demand professional character in all who direct important educational influences.

Dr. Edgar D. Shimer, Associate Professor of Pedagogy in the University of the City of New York, has asked very pertinently: "Why has the demand arisen not only for the establishment of chairs of pedagogy, but for the erection of colleges for the training of teachers, and special schools of pedagogy parallel to the departments of theology, law and medicine, found in our great universities?" The answer can be made by quoting the first sentence of Aristotle's metaphysics: "All men seek after knowledge." If the great Peripatetic could utter this as a truth in his time, how much more can we emphasize it as a fact in ours?

More attention has been given to the science of education, and more books on the art of teaching have been sold since the last half century commenced, than during all the twenty-five hundred years before that time. It is this that made Dr. Hannak, of Austria, at the head of the great Austrian pedagogium, say: "The progress of teaching is one of the surest guarantees of the progress of mankind." Multiply teachers, and we multiply knowledge, and the better the teacher the better the quality of the knowledge given. Man must be taught, and teachers must do the work. No business is like it. The Divine Man of Nazareth was "The Teacher," and never more a teacher than to-day. The work of great teachers such as Socrates, Plato, Aristotle, Thomas Arnold and Horace Mann projects itself down the ages. Our universities are great not on account of their halls and endowments, but because of the teachers in them. Poverty-stricken indeed is the school that is rich in endowments but poor in instruction.

In this connection the words of the late Dr. S. S. Laurie, Professor of Education in the University of Edinburgh, are very pertinent. He said: "Had Roger Ascham's College at Cambridge founded a lectureship on the first two books of Quintilian and on Ascham's own work, and done nothing more, the whole character of English public school education would have been revolutionized more than two hundred years ago. We should have been a great nation, measured by the standards of imperial power and wealth, but our citizens would have had a better use of their brains, greater love of truth, more open minds, more kindly hearts, more of wisdom, justice and righteousness. If I did not believe this I should give up the whole question of 'how to educate' as vain and empty talk; but I should at the same time have to give up my belief in humanity and in the possibility of a true civilization."

Hon. John Swett, of California, said in 1872: "Let colleges establish professorships of the science and art of education, and provide a special course for students who desire to become teachers. Let the high schools establish post-graduate normal classes and training classes to meet the demand for trained primary teachers. Colleges, normal schools, and high school normal classes all combined could supply the nation with trained teachers."

Larkin Dunton, LL.D., principal of the Girls' High School, Boston, said in an address before the American Institute of Instruction: "A school of pedagogics, ranking with or above schools of law, medicine or theology, and having its reputation bound up with that of a great university, would, it seems to me, be the crowning glory of our educational system; from it would go out an influence that in two generations would revolutionize the instruction in our academies, high schools and colleges, that would introduce a new era in school supervision throughout the country, and that would raise the business of teaching to the rank of a noble profession. I would provide for some systematic professional instruction for teachers in all our colleges; and, besides, I would establish one or more superior normal schools in connection with the universities."

At a meeting of English educators, held in London, July 6th, 1872, under the auspices of the College of Preceptors, the following resolution was passed:

"*Resolved*, That the institution of professional chairs of the science and art of education in each of our universities would be a most valuable measure, and ought to be pressed upon the attention of the government and the parliament."

In the discussion which preceded the passage of this resolution, the following facts and opinions were elicited: "Graduates fresh from universities were apt to think they knew all about the art of teaching; to overlook the fact that boys require a different kind of training from that which was suitable for men of mature minds; to think they have nothing to do but lecture as they have been lectured to; to look with contempt upon books on education, because the authors were merely schoolmasters, thinking that, as university men, well taught, and so on, they had ability to form plans of their own. Often these graduates had been found utterly unable to teach the most elementary subjects satisfactorily. It was extremely difficult to impress upon the minds, even of the wranglers, the simple principles of the art of teaching. They were not prepared to take pupils whose intellects were so little formed, and whose brains had still to grow, and prepare them to receive that amount of knowledge that it was expected they should have when they left school."

In a paper on this subject Rev. A. D. Mayo says:

"So far the average American college has obstinately refused to recognize the existence of such a science as pedagogy. Its young men are sent forth to occupy the commanding positions of high, grammar and academical schoolmasters, often with no valuable experience even in the lower grades of instruction, and not even a course of college lectures or intelligent reference to the literature of their great profession. Coming into these difficult positions, for which their scholastic attainments are often amply sufficient, they find themselves in contact with subordinate lady assistants who have received the best drill accessible in normal and training schools, backed by a considerable experience in all grades of the common school-room. It is inevitable that two forces so charged with positive and negative elements should strike fire. In hundreds of school-rooms the success of the instruction is marred by this open or smothered conflict; the learned young man, contemptuous of the academical inferiority of his girl-assistant; the bright girl graduate of the normal school, electric with tact and on edge with the new methods, poking fun at the pompous pedagogic incapacity of her principal. I am convinced, from long observation, that much of the power generated in the best normal and training schools and institutes is swamped by the obstinate indifference or hostility of the average male college graduate, in the master's chair, to anything that has not entered his college curriculum. The result is, all the worse, that the average college method of instruction is probably the most hopeless style of teaching now on the ground, often a bigoted holding on to the mechanical habit of cramming a boy with the contents of a small library of books, and calling that a liberal education!

"The profession of pedagogy is the latest comer among the professions of this country. The law, theology and medicine are already so crowded with partially and well-educated candidates, that the people are able to select the wheat from the chaff. No community of any considerable pretension is now compelled to take up with a pettifogger for its lawyer, a quack for its doctor, or an ignorant gospel ranter for its minister. The objective point of our system of normal education is to stimulate the preparation of teachers by agencies, public and private, popular and collegiate, till the same 'glut in the market' enables the school-committees to go into the field and choose the best the money supplied by the people will command."

In view of these facts it seems safe to conclude:

1. That all universities should establish departments for the teaching of pedagogics of the same character and thoroughness as those of law, medicine and theology.

2. That to those departments none should be admitted who are not graduates of normal schools of good standing, or can show attainments of equal value.

3. That those who complete pedagogical courses of study shall receive special degrees and diplomas, indicating the amount and character of the work accomplished.

We are indebted for these extracts to a paper by Hon. John Swett, late State Superintendent of Public Instruction of California, a man widely known as an able, judicious and successful teacher and administrator.

He was followed by Professor Nicholas Murray Butler, of Columbia College, who made an address upon the Duty of the University to the Common Schools.

An interesting discussion of the subject of Pedagogics ensued, participated in by Presidents Adams, Sharpless, MacCracken, Fell, Gates and Webster, and Professors Bomberger, Heston, Kephart and Lamberton, in which was indicated a growing conviction that Pedagogics should be provided for in university and college courses, and the extent which, in some of them, such provision was already made.

Professor William A. Lamberton, of the University of Pennsylvania, read the following paper on

THE DUTY OF THE COLLEGE BY ITS STUDENTS.

THE question is constantly asked by the outside world: What does the college do for its students? It may be that it is asked in most cases by those who are prejudiced against college training for one reason or another, and asked, therefore, merely to give themselves the opportunity of affirming, and proving to their own satisfaction, the uselessness of sending a young man to college for four years of his life. It may be, and indeed is often the case, that the unfavorable conclusions reached by these inquirers are based upon false or foolish notions as to what a college is, wherein lies its proper function, and what, accordingly, are the fruits the public at large, and the students and their parents, in particular, are justified in expecting from it. But, say what we may, this questioning, however conducted and from whatever spirit it springs in individual cases, is, after all, but one of the regular symptoms of our life of to-day, which submits everything to re-examination and demands that everything be so re-examined, and, if need be, readjusted in its constituent parts, perhaps be even rebuilt from top to bottom, so that it may be made to fit into, and work harmoniously with, the existent social machinery, and, until that be done in a manner satisfactory to the public sense, claims the privilege of scepticism. And, in matters educational, let us cheerfully acknowledge that such criticism and scepticism from without is a good thing, though at many points it may seem mistaken, blind and groping to sane minds well acquainted with the requirements of the problem and the unavoidable limits to the possibility of any complete solution. It is a good thing in its manifestation of the keen interest the public feels in this important matter, and a good thing, too, in that it prevents listlessness and stagnation, where listlessness and stagnation would be exceedingly dangerous. This question from without, What does the college do for its students, with whom, and upon whom, it has been working for four years, obliges us to ask the questions for ourselves, what can the college do and what should it do for them? To answer in general terms, it educates them, or it gives them preparation for after-life, is to say but little—hardly to answer the question at all—for the same question, in other words, will instantly come back to us: What is education, as you understand it? what meaning do you attach to life, and consequently

to preparation for it? Something more definite and specific, something more tangible, is required. Moreover, if we define education to be the training of a man's mental powers to full development and to the highest efficiency, we shall be told that something more than this is required, for it is not sufficient that a man's faculties should be strengthened and sharpened; a certain mental furniture is required, certain actual stores of knowledge called for, and even demanded, by the exigencies, and chances as well, of human life must simultaneously be given him. Now as these exigencies of life vary, as life becomes more complex in its character and in the demands it makes on individuals, this latter factor will vary likewise; some branches of knowledge, once considered of prime importance, may be thrown into the background, and may even drop altogether out of our schemes of education, though still pursued as matters of scientific interest or for whatever other reason; music, for instance, though still studied amongst us, is no longer considered a requisite in every well-constructed course of education (for men at least) as it once was among the Greeks; or, what is more likely, new branches of knowledge will in the future, as they have in the past, force their way to recognition; or again, branches already embraced in college programmes will demand and obtain fuller, more ample recognition. I remember when natural philosophy, as it was called, embracing physics, chemistry, mechanics, astronomy, geology, was taught in this university by a single professor, whereas now these branches are represented in the Faculty by some five professors and several assistants. Of course, such introductions of new subjects into a college course, while necessitated ultimately by the demands of human life, are conditioned also upon the degree of development they may severally have attained. Some sort of scientific consistency and formulation they must have received before they can justly ask to be introduced, though the outside world may meanwhile be shrilly clamoring for their admission.

Now it is in this double demand that lies, it seems to me, the essential difficulty of the problem our colleges are called upon to solve. Were the college merely an institution for the dissemination of knowledge, the problem would be simple enough. So many branches of knowledge would require so many teachers, and so much equipment and apparatus. The question would resolve itself simply into one of dollars and cents. Given money enough, there would be no difficulty in providing for every one all possible facilities for learning anything he might desire, the choice being left to himself. But the college is more than this: its purpose is that of training through, and by means of, learning. A certain amount or kind of knowledge is to be communicated, which shall exact of the student in its acquisition work sufficient in quantity, and sufficiently varied, to exercise thoroughly all his powers, and shall withal give him an insight into processes of study and work—into the methodology, as it may be termed—of knowledge. As long as the number of subjects, that, by reason of their contents, the demands of every-day life and their scientific completeness, were thought entitled to inclusion within the college course, was small, and (an equally important factor) their types were few, the original simplicity of the problem was not at all disturbed; they could all be taken in and worked into a system logically and naturally consistent, and all of them, without exception, made obligatory upon the student. There was no trouble about getting in enough of each of the separate subjects to

make them valuable as educational instruments, and at the same time to give the student a solid basis of knowledge that would give him a fair start, if he desired to push his acquisition further, nor was there any danger of perplexing him by the simultaneous presentation of a mass of heterogeneous subjects, calling for many varieties of mental activity and, by reason of the consequent diffusion of energy, tending to minimize the amount given to each: there was hardly a possibility that the mental force of the student in effective use should be appreciably lessened by the effort needed in sudden conversion from one form of work to another, much less that it should be almost totally consumed in the ever-recurring wrench of such conversion. But of late years, though the problem remains unchanged, the solution of it has become exceedingly complicated and consequently difficult. The large development of modern science, especially of the so-called natural sciences, bringing with it the introduction of entirely new sciences, and the fracturing up into separate, though interdependent departments, of others, which once stood as units, has been necessarily followed by a corresponding broadening and a minuter subdivision of the field of knowledge as represented in the College Faculty, so that it is no longer possible to ask of a student that he should in his studies cover everything that is taught at college: even to think of asking him to do so would be self-evidently absurd, since the amount he could get out of each of them, and the fraction of time he could give to acquiring its principles and following its methods, would merely be enough to distract his mind from his other studies, and not enough to produce any positive effect of its own. And the difficulty is not relieved by the claims frequently made on behalf of the various sciences, new and old, that in their peculiar methods they possess each some special character that makes it better adapted than others to give students such training as is now more especially needed, and in their subject-matter facts of knowledge which no one can properly afford to be ignorant of. It needs only that we examine even cursorily the catalogues of any of our prominent colleges to-day, to recognize, in the long list of subjects in which instruction is offered, and through which education is promised to the youth of our country, how complicated a thing it really has become to arrange courses in which all of these sciences may have their just claims satisfied, and the student on his side shall get the fulfilment of the promise that is made him. A glance at the same catalogues, again, will show us, what might naturally have been expected, that in view of the impossibility of including everything in one obligatory course, resort has been had to the principle of alternative courses, based on selection made in one way or another; but no consensus has been reached, either as to the method of this selection, its range in list of subjects, or its range in point of time, or, to put it perhaps more accurately, the precise point in the student's career where it shall begin. Shall we have fixed courses between which a choice must be made, once for all, when the student enters? That is, shall a number of courses be laid down to choose from, once for all, choice of separate departments or subjects being, in the main, excluded? Shall we have choice between subjects, with certain restrictions allowed from the beginning of the college course? Or shall we have a prescribed course for all for a certain period, say the first two years, and thereafter allow election between subjects, with perhaps an exception or two, that shall be required? All of these have their representatives in colleges that are doing good work; but is it not a thing to be regretted

that some general common principle has not been arrived at, that by its application should make more equable the educational processes throughout our land? The mere fact of the differences I have alluded to proves how difficult the problem has been found, and how tentative, and as yet inconclusive, have been the efforts to solve it. Nor among those, the majority, which open the doors to election in the Junior year, is there any more agreement as to what subjects are proper matter for the exercise of selection and what should be insisted upon as obligatory studies for those who are candidates for a degree. Now it is not my purpose here to discuss thoroughly the elective system, but only to touch upon it, in so far as the question of what the college should do for the student, requires that I should; to point out what seem to me the dangers to be avoided, and how those dangers may not only be avoided, but, perhaps, by skilful management turned into benefits. The questions that naturally come up as to election of studies are, who shall do the choosing? How shall the choosing be done? Should any subjects be obligatory and therefore excluded from the limits of election?

Who, then, shall make the choice? Shall the student be left to make it for himself in accordance with his own inclinations, tastes and abilities? It certainly sounds very well to say, let each follow the bent of his own abilities, as nature has given them to him, in the selection of his work in college. There is a temptation, too, for us teachers to adopt this view (I have seen instances of this, and the suggestion has been even whispered into my own ear); for it is natural to suppose that in this way the student will do work more profitable to himself, and more satisfactory and pleasure-giving to his instructors, who will see of the fruit of their labors more abundantly. But this temptation must be summarily thrust aside with a "Vade retro Sathanas;" for we are not engaged in a work in which our own pleasure or even our own harvest is to be looked to: we sow primarily that another, that the student, may reap, and in his reaping alone must we find our proper satisfaction; we owe a duty to all alike, the bright, apt and quick and the slow and dull that come under our charge; to all alike we are to give the full measure of our instruction, laboring, and glad to labor, with the weak that we may help them to secure a reward that will repay them and, through them, us for the labor. The probability of repayment to them, not that to ourselves, is the only one we have any right to consider: that, indeed, we are even bound to take into account. And as to the student himself, is he, as we find him on entering college, mature enough, has his mind reached that condition of stable equilibrium which is needed, to enable him to make a rational choice? Has he data enough, even if he possessed maturity sufficient for the right use of them? I think few would venture to affirm this, at least of the student as he is when he enters college; and will there not be, are there not every day under our eyes, all sorts of temptations, some of them, too, very insidious, such as the mere novelty of a subject, the known ease with which enough can be done in it to enable a student to worry his way through it, that would not be without their effect even on older minds and steadier heads, but which may become almost irresistible to the immature and as yet unstable youth? One kind of work may be naturally rather difficult for the student, and for that or some other reason he may dread it or dislike it: does it at all follow that he does not need to do that very work? Is he to be absolved from a task because he finds it hard, or because he finds it involves a cer-

tain amount of drudgery? What work in the world is there that, properly done, does not involve its drudgery? And must we not ourselves learn, and should we not teach our students, to face the drudgery and manfully overcome it for the sake of ultimate achievement? There is a very good Scotch proverb which declares that "Hard work's no easy." Surely it is better for the student that he should learn this lesson while yet at college, before he is forced to do so amid the buffets and contests of the world without. And if it be distasteful, should he not be taught that no one can do merely what he likes and what it pleases him to do, that we must often swallow our dislikes with as little of a wry face as may be, and do what circumstances, and those who know better than ourselves, call upon us to do? The lesson of self-denial and self-mastery in these matters may in many cases be the most valuable of educational influences, and we are bound not to allow those who are entrusted to our care to suffer, if we can help it, in these important matters. We have, of course, no right to manufacture difficulties that they may be mastered, and we are bound to help the student toward his goal by making such subjects, as all subjects, as attractive as possible; but we dare not, if we are faithful to our trust, either do his work for him or allow him, in whatever way, to avoid it. And then as to this matter of determinate inclination toward a certain line of study, how many students who come to college have any such easily recognizable bent? In twenty years of teaching I have seen very few, not more than could be counted on the fingers of one hand. Rare cases there are, of course, in which from earliest childhood definite peculiarities of adaptation to certain pursuits manifest themselves. In such cases it is to be expected that these overmastering proclivities will make themselves felt and will lead the possessor of them to work which will promote his development along these lines, or, if you please to put it so, will glut to satisfaction his peculiar intellectual appetite. But it is worth observing that this will take place, not by virtue of rational direction, but under stress of overmastering force. Even in such cases, it may be doubted, whether it is well to leave the decision to the student. Of this we may be sure, that, in these rare cases, the very marked character of the student's mind will prevent any permanent diversion from the sphere nature seems to have set him apart for; but this also may confidently be looked for, that such overpowerful inclination will make of him, if he be not checked and guided by some firm and determined hand, a one-sided creature, an excellent machine, but a poor specimen of man. And there may be worse risk yet: it is all very well to say with the French proverb—qui veut le but, veut les moyens—but our undeveloped youth has but slight sense of what the necessary means are for his predetermined end; and the very strength of his predetermination may interfere quite seriously with the attainment of his aim from his ignorant impatience of the needful preliminary study and discipline. Naturally the influence and judgment of parents ought to be exercised in determining the selection of studies, if election be thus left open, and, at any rate, should operate toward the prevention or correction of these evils. But, as a matter of fact, do they to any extent? Do parents not leave such matters to the choice of their sons, acquiescing benignly when a son desires to abandon Greek, because, before he has much more than mastered the forms of the alphabet, he has with prophetic insight discerned that Greek is an abomination beyond his powers of

endurance? Does it not repeatedly occur, when a term of idleness has brought its necessary reward in failure to pass some examination, and the boy desires to abandon such a subject, that his parent allows it or even proffers in his own name the request? It may be said, perhaps, the responsibility is theirs; let it rest where it belongs; but have we no duty in the matter? Though his natural guardian shuts his eyes to the boy's true interest, are our skirts clear? Does not the college exist for the rendering of true service in the boy's education? And may we shift the responsibility of the failure, which we do not try to prevent? Or, to put it in another form, are we to turn out inferior work, work that may even be harmful in its after-effects, because the parent is not alive to his own duty? How many of them really give much thought to the education of their children? Do not most of them think they have fulfilled the whole duty of a parent when they have sent their boys to school and college? But apart from this, how many of them, amidst the engrossing calls of business and professional life, are prepared to appreciate the end of education and judge of the means employed? I know of a case, wherein an average student, not a shirker by any means, touched in his ambition, or his vanity, because of the low rank he had attained in a single branch, and tempted by a course in another college that took his ignorant fancy, set his heart upon a change: his father, a man of average intelligence and a shrewd business man, took advice of the boy's instructors, and then, contrary to their advice, let the boy have his way: at the end of a year this boy was back again at his former college; the new course had not proved all that he expected, and with the easy-going consent of his father again he left it and returned. I could quote some more remarkable instances yet, did time allow. There is what seems to me unavoidable danger that, if this matter be left to the student, we shall in most cases have drift and not election. If now we consider the total course that is to be made up of specific selections (supposing election to proceed by subjects, as in most institutions it does), we shall be brought face to face with another danger. The educational value of any course pursued depends largely upon its consistency and logical sequence; and this not merely within the limits of individual subjects, but throughout; by interrelation and counterpoise of its component elements, the one supplying what the other lacks, the whole man must be developed, and a sound basis thus secured for subsequent more special work in his post-graduate life. Now our students know nothing, and their parents, in most cases, little, of the natural co-ordination and the natural sequence of the subjects they may be disposed to select. They may easily see that the more advanced portions of one study must follow the more elementary; but as to different subjects, that call into play different activities of the mind, can they tell how far these should be pursued simultaneously and how far consecutively? But if the selection be not left absolutely to the student, or to the student with the help of parent or guardian, shall it be made for him by the college authorities? Where this is done, within the possible limits, the difficulties above alluded to would seem to be largely met; certainly, consistency in the constituent subjects and logical sequence in the order of attacking them can be completely secured in this way; but, at the same time, the choice between one or other of the established courses is largely thrown upon the student, his liberty being only denied within the several courses, and that at an age when he is not at all prepared to exercise such choice; it may be even that

the selection is driven down lower yet into the domain of the preparatory schools. This may be unavoidable in any event, but it is, I think, extremely desirable that we should force it as little as possible by our method of arranging the college courses. Moreover, it would seem to have this disadvantage also, that it is legislating for the students en bloc, and leaves small room for taking into account individual peculiarities and requirements: and, after all, we must bring in the individual, so far as circumstances will permit, since education is finally individual; again, by the stage at which the selection is put, and the summary fashion in which it has to be made, appeal to the reason of the student is largely shut out; yet, even though we may think this side of the student to be insufficiently developed for independent exercise, it must be a desirable thing that he should, through his reason, be led to acquiesce in the selection that is made. So long as the number of subjects that had a just claim to representation in schemes of education was limited, no harm could thus be done; no choice being possible, the obligation to follow a prescribed course of study lay in the nature of things. But now that election is possible and even a necessity, are we not bound in some measure to turn our very difficulty to account, and to make the election itself an instrument for aiding the process of education? It is a truism that all restraints and all the guidance we give the young have, and ought to have, but one end in view: preparation for the day when the lad will have to stand alone, without extraneous props, stays or barriers save those of the common public law. The only right we can have to restrain is this: that some day the need of such restraint may cease to be felt. Restraint may be overdone; we may bind the wayward so tightly as to make him in the end a stiff, motionless thing: our artificial supports may but prevent the limbs from gaining by exercise the strength to be self-sufficient when the day of liberty comes; and then, with the removal of these props, the weakling falls to the ground. Our restraints and our guidance should be proportioned in amount and in duration to the demands of nature; a gradual relaxation should take place, which shall oblige the young to put forth their own strength for their own defence and support, just in proportion as that strength develops. A difficult task; but it is part and parcel of the work of education. There is nothing a man has to do in life that is more important than the rational choice of ends and of means to those ends. This involves a clear perception of the nature of the ends and of the relation of adaptability between them and one's capabilities; only after this can we gain a like clear perception of the means required, as conditioned by the end to be aimed at, and the characteristics of the individual. Ordinarily, so far as I can see, there is no school where this lesson is learned, except that of experience, when it may come too late. It is learned mostly through repeated failures, and one failure too many may occur before it is learned. Not much perhaps can be done in this direction in college; but if anything can be done, good will come of it, and the chance is worth taking. Now may not the election of studies be used as a means to this end? Alone, the student cannot make the choice, for he has no data, except such as will probably mislead him. But would it not be well to allow him a certain liberty in choosing, conditioned and limited by necessary rules, and by the personal action of an adviser or advisory board appointed by the college authorities? This board should set before him the arguments, pro and con, affecting his proposed selections, and should besides lead him to formu-

late for himself (under their guidance) some rational and properly arranged sequence of studies from those that are open to election. This would accustom him to look well into the matter before making a choice, to weigh well the advantages and disadvantages likely to arise from a proposed course of study: in short, to do anything but jump at it, whether from a senseless craving to know everything, an equally senseless prejudice against certain studies, or a baseless belief that one study is more useful than another. This choice, limited at first as to range of subjects and as to the degree in which the decision is left to the student, might gradually be enlarged as he grows older and gains experience in selecting. Under no circumstances should absolute freedom of choice be sprung upon him. Such a process would, I think, enable us also to secure consistency and sequence, which are so essential. And we may, moreover, in this way bring our student to see something of the interdependence of correlated subjects in themselves, and of their relations to himself and his own state of development at a given moment. To have shown this fundamental fact, that studies do stand in natural relations to one another, which cannot be violated with impunity, and to have done this in the best way, by leading him, through his reason, to conform to them; to have convinced him (as we thus may) that work that is to have profitable outcome is not possible when energy is diffused over a heterogeneous range of subjects; that it is real economy of time to spend many days in beginning as the only way to insure a rapid ending (except it be a complete breakdown) is to have given a youth one of the most valuable lessons he can ever receive. And the chief value, perhaps, of the lesson will be, that it is not forced upon him authoritatively, but he is led up to it through the conscious exercise of his own reason.

An equally important question is: What subjects, if any, should be excluded from election and made obligatory? Much will depend, in the answer we give to this question, upon our view of the object for which we are preparing our students. Perhaps the commonest form of stating it is this: that we are to prepare each man for his work in life. Now, it is a true and a noble thought that each man has a work to do—a work that he owes to his fellows and to society—and that he, moreover, owes it to himself as well to do this work thoroughly and conscientiously. Another form of statement, that he must be fitted to take his place amidst the complex relations of modern society, so far as I can see, amounts to pretty much the same thing. But any truth, however noble, may be vitiated by being pushed to unwarranted extremes, by being made to stand for the whole truth, when it is only a part, albeit a most considerable part of it. And I fear that this has happened in this instance: the part has been made to pass for the whole; and one is tempted to say, "These things ought ye to have done, and not to leave the others undone." Each man has indeed a work to do, and woe be to him if he do not perform it; but he has also a life to live, and it is as part proof and result of this life that he is called upon to do a man's work in the world. A man's life, known only to himself (if indeed wholly to him) and his Maker, has more in it than the deeds he does or the works he executes. We judge him by these, and, from our limitations, cannot do otherwise; but the very principle on which we base our judgments, "By their fruits ye shall know them," bears witness that these external signs are not the very life itself: and this life, be it remembered, as it is not summed up in external deeds, neither does it consist wholly in the multitude of things learned,

or the scientific processes of the intellect. It is largely of the heart, as well as of the head. Now what we chiefly need on this side of our nature (and the other must to some extent suffer for lack of it) is an ennobling and purifying influence, one that shall raise and enlarge our ideals; for a man must learn that he is, out of the materials given him, as has recently been said, to construct an ideal self; and that ideal self is nothing but the individual brought into harmonious relation with his country, his times, his race and the outside world—a tremendous problem, but there it is. The analytic study of these subjects will doubtless do much, but to all of them no man can devote himself; time is wanting. And even then, with most men, much would be left undone. To translate statistical tables and facts of science into purifying truths of the heart, as I may term them, is given to very few. But there have been, from age to age, provided mighty voices, with utterance of power and gift of insight and of graphic presentation, who can take of the things that are ours and show them to us in a light and with a transparent flood of meaning, of which we ourselves are incapable. They hold that mirror up to nature, without which we should be blind to nature. They body forth in tangible shapes the typical man, which we should never be able to piece together out of the disjecta membra that our weak vision may discover. And through their typical presentation, as well as by more direct enunciation of moral and spiritual truth, they lift us to a higher plane, strengthen us in our weakness, console us in our sorrow, cheer us in our dejection, purify us of our dross and give us courage for strenuous self-determination and valiant work in the world. Biographies, useful as they are in setting forth noble models, are no adequate substitute for this. They lack power in the first place, and in the second are too closely tied down to truth of fact that means nothing when not interpreted. Scientific study of human thought will not take its place either; it is too analytic, and fails in inspiring power. A single word from one of these masters gifted with this power of uttering eternal truth for all and for each, and of reaching the head through the heart, will often do more for the inspiration of a noble life than hundreds of scientific disquisitions. We may not be able to do more than point out clearly to our students this fountain of perennial truth; but so much, at least, we are bound to do. And if we can excite in them as well a taste for its beneficent waters, we shall have rendered them an inestimable service. The subject of literature, not as a catalogue of historic names, or as matter for æsthetic criticism merely, but because of its educating influence on our nature, of which it is the liveliest expression with the highest power of reaching the very centre of our being, I take to be one of the subjects that should not be optional. Again, as no man can live in this world without intercourse with his fellows, and consequently without being called upon to express his thoughts in language, it seems to me that careful training in this matter of accurate expression of thought is indispensable. It may be thought that this may be secured incidentally by what writing may be required in connection with other subjects; but while this will give valuable practice, I do not believe it will altogether take the place of special training; and, moreover, the importance of the acquisition surely demands that specific attention should be given to it. The acquisition of a clear style, if not an elegant one, which may be beyond the reach of many, is not only incontestably valuable in itself, but necessarily has an important side-influence upon clear thinking. It may not be true that clarification

of one's ideas will of itself lead to clear expression of them, but certainly the labor needed to arrange one's thoughts for logical presentation cannot be without some value toward promoting accurate thinking. The mere formulation of our thoughts in words will ofttimes lead to the rectification of errors in thinking. Is it not also needful that the general laws of right thinking should be properly presented to our students? These laws are exemplified and applied in all directions in human life and human pursuits, as well as in the exacter processes of the sciences. It surely cannot be sufficient that they should only be presented to him in the special study of any of the sciences, which can only give them to him tinged and specialized by the limitations due to its application of them. Such needful illustration may easily be given him besides by one of the elective studies, for, other things being equal, one illustration will serve as well as another; the illustration, if given alone, will not illustrate; and, moreover, in a scheme of general education this function of illustrating methods of thought is the most valuable side of scientific study. Shall we, again, allow our students to study or not, as they please, such a subject as history? I do not mean in the way of special study of particular periods, much less in such fashion as to prepare for scientific historic investigation, but for the purpose of giving him some conception of where he, as a man living now, stands in the present age. Should he be left, merely because the labor of fixing in the memory the cardinal facts and dates is distasteful to him, quiet and undisturbed in the animal-like acceptance of the facts of his environment, without the shadow of a conception of what it has cost in time and effort, in sacrifice, suffering and even blood to achieve them, or even without a thought that any price at all has been paid for them? Is it not of the utmost value to him that, even in such summary fashion as must perforce be adopted, he shall be led through the story of the life and growth of the human race, and shall be carried, as he thus follows the course of human events, through a somewhat analogous process in his own mind, a sort of sympathetic evolution after the fact, of reasoning out with the help of these cardinal dates and facts the logical thread that runs through the historic series? And suppose it be argued that complete success in such efforts is impossible, are we to attempt nothing? I feel quite sure that a great deal may be done toward this; and even if only a little could be achieved, that little would be worth the doing. Much of our sowing must wait long for a harvest, but we must sow nevertheless. Are we in any case justified in leaving it to personal predilection, or any other accident whatsoever, whether our students rationally place themselves in thought, where historic sequence has placed them in fact? By reason, similarly, of their human interest, psychology and ethics, the one analyzing the mental operations by which all knowledge is in the first instance arrived at, the other dealing with the governing principles of human conduct, should not be omitted. As, too, man has a body as well as a mind, and his personal state and outward activity must be largely determined thereby, some knowledge of its structure and of the laws of health to which it is subject should be given. Not only should there be, as several institutions have seen, a compulsory course of gymnastic training, with a view to health and not athletics; but this course should be supplemented by another—brief, of course, and giving only the general outlines of the subject—in physiology and personal hygiene. Some may think, perhaps, that a course on physiology in the lower schools would answer the same purpose,

but I believe that, while this would not be amiss, a perhaps more extended course given to young men at an age when they are more capable of appreciating its importance and its bearings upon their personal comfort, happiness and success in life would be both a useful and a mentally profitable thing. To these we must add mathematics, the science of deductive reasoning, in the processes of which the young mind most assuredly should be exercised. And in mathematics the course should be pushed far enough to give ample illustration of both the synthetic and analytic methods; and if the two could (and I think they could) be so worked together as mutually to illustrate one another by contrast, it would be clear gain. A simple course, too, involving the principles of the calculus, which need not be carried very far, would not be amiss, to say the least of it. Some may object to this last suggestion because of the intrinsic difficulties of the basis of the method, but it has now come to be so universally applied in the sciences that avail themselves of mathematical methods, that it can hardly, I think, be omitted; it has almost taken its place among the elementary departments of the science. The valuable drill to be obtained from careful and accurate practice in grammatical analysis can in no way be so well secured as by the study of foreign languages. This is so noticeable a fact that many men will be found who maintain that the best way to get at a proper comprehension of the grammatical structure of the English sentence is to study a foreign language. There is, for one thing, not the same temptation to overlook minute but important facts, the sense being hidden for the most part until those facts be set in a clear light; and, besides, the different point of view which at times lies at the bottom of differences of construction is provocative of thought in the endeavor to account for it. The similarities and the dissimilarities, as compared with our own tongue, are alike instructive, as by both alike some clearer conception is forced into the place of the blunted notion that follows upon mechanical adherence to usage. For the sake of this drill, for the sake of the more intelligent use of our native English it tends to produce, and for the yet more valuable service it renders in opening up before us wider fields in literature and in science, the study of foreign languages should be included among obligatory studies. I may add, also, that this study may be so conducted as to provoke and promote the processes of observation and induction, as well as any of the sciences, which are sometimes believed to have a monopoly of these methods; it is true that to make this possible the study must be pushed beyond the rudiments, as I think it should be in any case.

I have been led somewhat beyond the scope of my original purpose in what I have said, but it seemed unavoidable. What I have particularly aimed at has been not so much a scientific catalogue of subjects that should be required, as to lay down a principle, which seems to me to be too often ignored—namely, that one prime object of our work is to bring the student into a certain attitude or frame of mind, which shall secure him his proper place in his country and his age, and shall at the same time open up the highest possibilities for his individual life; hence it is I have developed more fully some of the subjects touched upon than I have seen fit to do in the case of others; they are those as to which, what seem to me false notions are more prevalent. Even within the lines that I have drawn in this general fashion there will be seen to be room for selection; what languages other than the English, and what literatures other than the English,

should be studied are in this case. And, outside there are all the natural sciences to draw upon for purposes of election. I would only add one warning: that if groups of alternations be set up, they should be in some real sense equivalents the one for the other; history should not be, as I remember once having seen it, paired off with mathematics, nor mathematics with any of the sciences of observation.

The work of a college is by no means done when its course is laid out: it is only begun, even when well begun. More important yet, in fact most important of all, is the way in which the course is carried into effect. There are as valuable lessons to be given our students by the quality of work we demand of them, as by the subjects in which we profess to instruct them. To quote a favorite saying of a friend of mine, il faut que la charte soit une vérité; otherwise it is so much waste paper. The *Επιστολιματοι δυνάμεις*, which Demosthenes cast up to his countrymen, were no more palpable absurdity, in their war with Philip, than will be all the courses we may lay down, if we do not vigorously live up to them. It is a debt we owe, not to our reputation alone, but to our students as well, that we should by practice, and not merely by precept, burn into their minds the firm persuasion that good work according to the scheme laid down will be exacted from every one of them. We are here to do a certain work; they come here to perform certain tasks, which, it is believed, will, when performed, send them forth with minds well furnished; not scholars necessarily in the high technical sense, but the making of scholars, if they desire to become such; and, in any case, ready to take their place as men, with faculties trained to methodical work and so far developed as to fit them for their after-work in society, and for the further pursuit of that self-culture which every man owes to himself. We virtually promise to do our part toward this result; the student virtually promises to do his. Both promises must be kept: and to this end we must insist that he keeps his. The college course being arranged in a graded series, the first and most necessary thing to be done, it should seem, would be to demand the proper and adequate performance of the work in any one grade before the next is entered upon. If the grading means anything, it means this—it means that any given term's work is the basis upon which that of the subsequent one is to be built; and if the foundation be weak and insufficient, what shall we say of the stability of the building to be erected upon it? We may say, if we choose, either explicitly or impliedly by our silence, that all is well, but will that make it really so? Clearly, we have no choice, if we will be honest: we must insist that, before further building can be permitted, the weak places in the foundation must be repaired, and its strength and stability brought up to the required standard. If necessary, the work must be entirely done over again. To act otherwise does threefold harm: it harms the college that turns out inferior work; it harms the class whose time is wasted perforce from the presence of men who are not up to their tasks, keeping the average student back because of the slow pace of the laggards; it harms the man himself by allowing him to suppose, and comfort himself with the thought, that he can reap the reward of work which he has not done. Promotion from class to class, or from grade to grade, and in the end the crowning fact of graduation, the student should be made to feel are rewards for certain degrees of attainment and progress to be accomplished by the performance of set and regular work, of which work the only

evidence that can be accepted is some fair test by examination. If that test shows weakness anywhere, such weakness must be repaired within such time as shall prevent its vitiating the work that is to follow; and if this be not done, or if the defects are of such a character as to preclude the possibility of its being done, then the work must be repeated de novo. And this in each separate department. For while strength in all but one or two departments may make it, and should make it, easier to remedy deficiencies in these one or two, this cannot do away either with these deficiencies or with the disastrous results of them if not remedied. And, while of course special reprehension should be visited upon those who have fallen behind from fault of their own, and none whatever upon such as have been unfortunate through sickness or other unavoidable cause, yet in the latter case, as in the former, must evidence of work done be demanded before reward for work done be granted. The fact of misfortune does away with blame, but not with the inadequacy of the preparation for future work, or with the equally certain fact that subsequent work will be valueless, if the inadequacy be not removed. It is natural and laudable to endeavor to relieve, as far as possible, such students of the result of their misfortune; but the phrase "if possible" points to necessary limitations; it is no proper relief to say that what has not been done will be passed over as done; and it is indeed very far from being a relief; it savors, rightly considered, much more of aggravation to ask for what amounts to double work, where, as I have seen in some cases, the student's health is barely sufficient for the tax of the regular work. If the inadequate preparation be due to lack of means, the case is not altered; we cannot in this sense, any more than in any other, have one standard for the poor and another for the rich. If limitation of means necessitates limitation of time, then the very best thing such person can do will be to give time to the fundamentals, and, this done once for all, push his studies as far as circumstances will allow; but he must not ask, as so many do (and if he do ask, we must flatly refuse), to be allowed to slight preliminary studies and go on with the college work he is not really prepared to undertake. If this seem to any hard measure, let them consider that it is but giving a needed lesson in a very practical way; that a man's business in this world is to take his circumstances as he finds them, and out of them, out of their very disadvantages, to make for himself instruments for his advancement; that what cannot be altered must be accepted, and his work and effort must be addressed to achievements that are possible; and finally that, above all things, he must be honest with the world and honest with himself in his estimate of himself and the demands he makes for himself. He will gain in manliness by being led to look his case squarely in the face and accept it for what it is; he can gain little, and nothing to be compared with his moral loss, by believing, and asking others to believe, that he stands fairly where he does not stand. If it occur, as it will, that to insist upon repetition of work unsatisfactorily performed interferes with advance in another department where there is no deficiency, the solution is simple enough: to let him go on without repeating the back work will not do away with the deficiency, but will assuredly vitiate after-work and set a dangerous precedent to tempt the student in the future: of the two evils this, as the greater, should be avoided. I have heard it maintained that such stringent administration, possible enough in professional schools, where the market value of the degree has weight with the

student mind, will not work in general and unprofessional college work: this I cannot believe: I am persuaded that the student's estimate of the quality of the work he is to render depends entirely upon us: if we constantly and presistently ask good and faithful work, we shall get it; if we do not, we shall not: the student's standard of work, I repeat, is ours. Let but this method be applied not so much by stringent rules, or by preaching, as in regular practice, as the several occasions for it arise, and, I am sure, from having seen it in practice, that the student will quickly grow accustomed to it, will soon grow proud of his college because of it; the work done will improve in quality and in quantity, as the removal of dullards and laggards enables the classes to advance more rapidly, and the college gaining the reputation of doing thorough work will see the numbers of its students increase. Moreover, a most salutary lesson will be given the student; that only work done brings advancement; that each step forward depends for its security upon the proper footing gained by the preceding one; that work must be done at any cost, and pleasure has no rights till work be done; that of two duties, the nearer must be done by preference, the more important must have precedence of the less important. A collateral advantage, but not an unimportant one, is, that in many ways this strict insistence upon the performance of regular work will tend to simplify discipline: the student will learn easily and quickly that to keep in his place he must forego all frivolities and naughtiness that may in any way interfere with his work; that he cannot afford to absent himself from class-room ad libitum; even athletics will cease to be a disturbing element, as they will be necessarily arranged for such hours as will not interfere with college duties. Such results I have seen proceed from this method, and that in a college which, so far from tabooing gymnastics, was one of the first to introduce obligatory work in the gymnasium. But two cases I must yet allude to: suppose a student, having failed in a given term's work in any subject, desires to abandon the further pursuit of that study: if this failure be due clearly to lack of work, not lack of ability, then, for the reasons stated above, he must be required to repair his deficiencies before his request can even be considered. The lazy must be taught the value of industry; the vacillating that of steadfastness. If it be said, this may drive him from college, then, I say, he had better go; the little that he may perhaps gain by hanging on for the rest of the college period will not compare with the loss that would accrue from the encouragement thus given to shirking and vacillation. But if it become apparent that the student, faithful in his work and equal to the demands made upon him elsewhere, is naturally incompetent to deal with this particular branch, he should be allowed, encouraged, even advised to abandon it, and substitute some other in which his prospects of fruitful labor are greater: there are men for whom the time they would have to spend upon a particular study would be out of all proportion to the profit they could get from it: in such cases it would be cruel, it would really tend to defeat the true end of college discipline, to require them to continue in a road which for them is a cul de sac, and that of the shortest. Lastly, we from time to time meet cases like the following: a man comes to college, who has already, though he does not know it, reached the end of his tether. He has got all the learning he is capable of getting in the various branches included in the college course: consequently by coming to college and staying there he can neither get more learning nor any

training. It may be maintained, I have heard it maintained, that no one is so dull but that the college can give him something: this I am willing to admit; but the ratio of the profit to the time spent in getting it is in our brief span of life an important matter, and all I maintain is, that he will pay too high a price in time for what he will get in learning or training; whereas if he would only turn his energies in some other direction, if he would take up such occupation as he is fitted for among the many that the world offers, and in which it needs workmen, the profit, even from an educational point of view, would be greater for him, and society would be incomparably the gainer. Learning is a fine thing, but it may be bought too dear. Now what shall we do with such an one? The only honest thing, the thing, therefore, that we are here to do, is to set the true state of the facts clearly before him, as gently as possible, but firmly for all that, and show him that we have no room for him, pointing out at the same time that there is a man's work for him elsewhere, and that he owes it to himself and to society to do that other work, out of which it only depends upon himself to extract education that will promote his growth in manhood better than any the college could give in his case. We must be careful, as some one has said, not to spoil a probably good shoemaker in trying to make a certainly poor scholar.

I cannot avoid touching upon another topic, but I shall only touch upon it, as it is the subject of a special paper to be presented to the Association; it is examinations. Our instruction will avail little, if it is only a day-to-day business: more important far than the specific details, is the acquisition by the student of a general view of the outlines and the scope of his various studies. As he goes on from lecture to lecture or from recitation to recitation adding one small string of facts to another, he has no conception of their bearing upon one another and their place in the total group; moreover, if nothing beyond this be attempted, there is danger with the average students that the new facts may tend to drive out the old. The latter difficulty may to a certain extent be remedied by a well-arranged rotation of subjects, which, by giving the mind repose for a little as regards certain branches, will afford time for it by unconscious process to appropriate to itself, and arrange in proper order, the store of facts received; but the general view of the totality, as grouped into a scientific unity, can only be given by a rapid review that will lay stress upon the cardinal facts, their importance in the group, and the general scope and outline of the subject that has been presented in detail. Now the only way, so far as I can see, in which this can be effectively done is by following up the presentation of the subject with an examination. I think it will be found that when this is not done, the retention of the separate facts is not so certain, and even when they are retained, it will rather be as isolated units than as constituent parts of an organized system. Moreover, it is a valuable practice for the student, even a necessary one, and one that we should insist upon, that of carefully reviewing the ground he has been over for his own sake; that he may be enabled advisedly to say to himself just where he stands and what are the weak points in his mental furnishing; this he should do from time to time: we all know how hard this is for ourselves when we are not compelled to do it; what probability is there that young students will do it, if strong reasons, operating from without, be not brought to bear upon them? Let us not be frightened by the cry of cramming; to work over again rapidly ground that has been properly gone

over before is a sort of cramming that can do no one any harm, and in any well-conducted examination there is small likelihood that a few days' work will make up for the loss of a term. There is besides another point worth considering: it comes to every man in the course of his life to have to get up a subject rapidly for a special purpose. Now this cramming, that excites so much outcry, is precisely of this nature, so that even for those cases where it is illegitimate, and can hardly be productive of immediate use, it may afford valuable exercise, all the more valuable if it be coupled with the lesson that thorough knowledge of any subject is not to be arrived at in this fashion. And I really see no other method by which a man's attainments are to be tested fairly, since among these attainments the general view of the ground already covered must occupy the foremost place.

In all of this the personal influence of instructors has large scope, but a well-considered and digested system is indispensable; there is another field in which the personal influence and the atmosphere it creates are paramount. It is not sufficient that tasks should be accurately exacted; the character of task-work must be removed from them as much as possible. The work, if it is to be done with the highest efficiency, must be pleasurable work; and this with students, as we find them, can hardly be the result of intrinsic interest in the work itself, for not enough of the whole field of it is present to their minds to inspire them with any feeling toward it one way or the other, and their tastes are as yet too little determined to admit of any decisive promptings; what interest they may be led to feel must be entirely of a reflex character; it can be nothing but the repetition, repercussion, one might name it, of the interest of the instructor, as manifested by the energy of his instruction, the intensity with which he attacks his subject, the pleasure he takes in rehearsing and communicating its salient features, the eagerness with which he welcomes beginners and endeavors to impart to them something of his own personal attachment to his favorite study. Such interest and intensity, even to the loss almost of self in one's subject, will impress the student with the notion that there is matter in it to interest human beings: this accomplished, half the battle is won; they will certainly be carried so far by the contagion of enthusiasm as to find the work no longer irksome, and may in the end become alive to it with an enthusiasm of their own. But whether matters go this length or not, whether the mind of the student is or is not fired with the ardor that leads to professional devotion to any single branch of learning, this much cannot fail to be secured, and this much we are bound to give him: a reverance and love for truth wherever found, by whatever specific names it may be called, a determination to seek after and pursue it, in whatever direction after-circumstances may point the course of his life and work. No man should be allowed to leave college with the notion that the scholar's life is the unattractive, semi-lunatic life of a dry-as-dust, rummaging amidst disgusting ash-heaps for a few scattered grains he is pleased to call facts, but in which the world of mankind has no earthly interest, and for which no one but a dry-as-dust, with distorted notions as to the relative value of things, can care, or be expected to care, a button. He should, on the contrary, leave the college, convinced that the world is crammed full of truth; that there is no higher calling than that of the seeker after it; that the discovery of the slightest fragment of it is of inestimable value, and the discoverer merits highest praise, and all the more so for the bushels of chaff he may have had to sift away to get at it.

The college, to resume, owes this to its students: to present to them such subjects as will both train their minds and put them in an attitude of harmony with their environment, furnishing them likewise with facilities toward the inner life from which the outward must spring; it owes them the stern lesson of duty in the regular performance of set tasks, with the corollary to this that slighted work will revenge itself upon him who slights it; it owes them the lesson of the imperative necessity of frequently taking stock of one's mental possessions; and to crown all, it owes them the inspiration of the love for truth, eager interest in discovery of new truth, and eager readiness to further, in every way, such discovery.

President Seip, as Chairman of the Committee on Nominations, reported, recommending the following amendment to Article III of the Constitution, viz.: that for the words "Vice-Presidents" in the said Article be substituted the words "One Vice-President from each State represented in the Association," and the word "a" before Recording Secretary in the same Article. A ballot was cast, and the amendment declared duly made.

On motion of Professor March it was *Resolved*, that a committee be appointed by the College Association of the Middle States and Maryland to report two or three English Classics as permanent texts for entrance examinations in the English language.

(The President subsequently announced as this committee:

Prof. F. A. March, of Lafayette.
Prof. H. S. White, of Cornell.
Prof. H. Jayne, of University of Pennsylvania.
Prof. T. O. Murray, of Princeton.
Prof. T. R. Price, of Columbia.
Prof. H. B. Adams, of Johns Hopkins.
President Sharpless, of Haverford.)

On motion, the afternoon session adjourned.

Friday Evening, November 29.

A reception was given this evening in the Chapel of the University to the College Association, the Schoolmasters' Association, and the Folk-Lore Society of America, the two latter bodies holding their annual conventions in the University

buildings concurrently with the College Association. The platform was occupied by Provost William Pepper, M.D., LL.D., the Hon. Seth Low, LL.D., President-elect of Columbia College, and the Hon. Andrew D. White, ex-President of Cornell University. Provost Pepper, as President, read the following paper:

THE UNIVERSITY IN MODERN LIFE.

In discharging the agreeable duty which devolves upon me to-night, it has occurred to me I might appropriately speak to you of the influence of the University idea in modern life and of the rôle which the University should play in our communities to-day. Of course it will be understood that, in the informal remarks I shall make, there is no allusion save to our own communities and to our own American Universities. I could not hope to adequately discuss these, and surely I should fail to appreciate the peculiarities of Universities abroad, determined, as they must be, by traditional influences, by governmental relations, or by local conditions hard for anyone to unstand who is not to the manor born. Indeed, it is already clear that in our own country the varying conditions and constituencies which surround our Universities involve some important differences in the development and activity of each, though there are enough broad features of resemblance to make it proper to consider them for our present purpose as a group. I am not sure but that it may still strike some as peculiar that we should speak of a group of American Universities, as if there were actually a number of them, while but a few years since it would have been difficult to show just cause why the title should be applied to a single institution on this continent. But should such question be raised by any, I would prefer it were answered not by one of ourselves, whose criticism might be suspected of a taint of partiality, but by a most clear-sighted and fair-minded critic from abroad, who has lately subjected our social and political organization to a searching study. It is Bryce* who says of us that our "great Universities of the East, as well as one or two in the West, are already beginning to rival the ancient Universities of Europe. They will soon

* The American Commonwealth, vol. iv., p. 553.

have far greater funds at their command with which to move towards the same ideal as Germany sets before herself; and they have already what is better than funds—an ardor and industry among the teachers which equal that displayed fifty years ago in Germany by the foremost men of the generation which raised the German schools to their glorious pre-eminence. . . . And, if I may venture to state the impression which the American Universities have made upon me, I will say that, while of all the institutions of the country they are those of which the Americans speak most modestly, and indeed deprecatingly, they are those which seem to be at this moment making the swiftest progress and to have the brightest promise for the future. They are supplying exactly those things which European critics have hitherto found lacking to America, and they are contributing to her political as well as to her contemplative life elements of inestimable worth."

For one, I am profoundly thankful that to an impartial observer it thus appears that Education, that mighty power which equally with Religion and with Commerce promotes civilization and human happiness, is here successfully asserting her position as one of the essential factors in modern life.

While it is true that a certain kind of education may exist without Universities, it is certain that Universities, which are the crown of the educational system, cannot exist, save in name, without a sound system of genuine education extending downward from the University to the grammar school. It may seem of comparatively little moment that in this country there has been, and in decreasing degrees still is, confusion as to the precise sphere of School, High School, College and University. We might have had no high school, had grammar schools all been satisfied with their position and work; we might have had no University, had all Colleges been modest and self-contented with their lot. The pretensions of President Johnson, of some College in the Far West, doubtless provoked Mr. Bryce's inward amusement when he gave a long account of his young University, and dilated on his plans, with frequent reference to the efficient faculty, but, on being questioned as to the number of professors in this distinguished body, replied somewhat reluc-

tantly that just at that time the faculty was below its full strength, but would soon be more numerous. "And how strong is it at present?" persisted Mr. Bryce. "At present it consists of Mrs. Johnson and myself." But I trust that long ere this the delightful confidence of our unknown colleague has been rewarded by such liberal legislative appreciation that his teaching force has swollen to noble proportions.

And yet it is of high importance that clear conceptions should be held by all, at least upon the relation between College and University work. Neither one is the more important, the more useful, or the more dignified. The College which deliberately limits itself to legitimate College work, and does that work admirably well, is accomplishing as important a service to education as can be done by the University. It is not to be expected that each College shall be equally distinguished in all branches of College work: it is not even necessary that each should undertake to teach all the subjects which come appropriately within the scope of proper College education; for this scope is of necessity a very wide and ever-widening one; but it is of the essence of a sound educational system that there shall be an abundant supply of Colleges where the instruction, however comprehensive the curriculum may be, shall be thorough, efficient and complete, as far as it goes. It is of vital importance that the authorities of Colleges shall recognize that to limit the number of branches taught and the number of instructors employed, so that the quality of the teachers and the adequacy of the equipment shall be commendable, is a duty to the student, to the community and to the College itself. May it always hold true with us that, whatever may be the number of our fully developed Universities, there shall be a large number of Colleges of the highest rank, proudly conscious of their limitations as they are of their achievements!

The line which divides College work from University work is a constantly shifting one. We can speak only of it as it seems to exist here to-day. It will possibly be determined always more largely by the needs of the surrounding communities than by theoretical considerations. When we consider that, in our conception of University work, there must be included all

the professional schools, which should occupy at the least from two to four years, and that, as our society is at present constituted, it is essential for the vast majority of young men to get at profitable work by the time they are twenty-three or twenty-four years of age, it appears clear that the work of the College must for the most part be done, if done at all, before the age of twenty-one years. It is impossible for us to overcome these widespread economic conditions. We are not educating in our Colleges, despite the great increase in their number and wealth and advantages, and the increased ease with which free tuition can be secured, any larger, if indeed as large, a proportion of our young men as we did ten years ago. Doubtless there are many reasons which go to explain this anomalous state of things, but among them it counts for a great deal that the progressive advances in the requirements for admission to College have caused a corresponding increase in the average age at matriculation. The matter has now reached a stage where all begin to feel that some counteracting influence must be established, but opinions differ widely as to the wisest course to be pursued. Just as there have been many lines of experiment in regard to elective studies, so it seems desirable that we should test various methods of securing the B.A. degree at an average age not much exceeding twenty-one years. In no College, we may be assured, will this be effected successfully or profitably by an actual lowering of the standard of requirement. It may be that the solution will be found in some reorganization of the curriculum of the fitting-school, which will enable the average student to enter College with such improved preparation that he can attain the present standard for graduation in three years. It may be that it will consist rather in a readjustment of the studies in the senior year and in the subsequent University courses, so that the last College year shall be made to count as one of professional study, or for the degree of doctor of philosophy. Or it may be found that the principle of according a certificate privilege to carefully selected schools and teachers will permit such economy of time and effort in the fitting-school as to enable the average student to bring up to College the present admission requirements at an

age from six months to one year earlier than now obtains. Should this latter prove to be the case—and there are some grounds for believing that not only will it do so, but that the methods of study and the mental training of students, so fitted for certificate instead of for examination, will be found superior—it will be, on various grounds, the happiest solution of a highly important problem.

But however solved, it is manifest that solved it must be, since in all Colleges, whether they exist independently or as departments of a University, there is felt more and more strongly the demand that the College work shall be conducted so that true University work shall be the normal and usual sequence.

It is the result of this demand that all over our country there are felt a quickening and an unwonted activity in the lines of advanced study; and, fortunately, this demand comes at a time when our Universities are impressionable and plastic. If we suffer in dignity from lack of binding tradition, we gain in vitality and capacity for development; if the absence of government subsidies throws heavy burdens of responsibilty upon some of us, the freedom from official restraint and from political intrigue and influence is a rich equivalent. Just as, on the one side, the University is the outgrowth of the College, and its departments and courses adapt themselves so as to be the extension and complement of the College work; so, on the other hand, should the University be in equally close touch with the community, and from it receive impressions of its advancing needs, intellectual and practical, and should respond to these by a prompt expansion of its scope or arrangements, so as to satisfy fully the requirements. No organization can be conceived which requires to be more sensitive, more responsive, more capable of assimilation, than our Universities, standing, as they do, as the intellectual centers of great communities whose social and intellectual conditions are changing and advancing with unprecedented activity. Experience has already taught us that if this position be maintained, and the largest service of the community be taken as the sole standard of our duty and mission, there exists here, as nowhere else

in the world, an appreciation of such an attitude, and an eager willingness and an unlimited ability to place at our disposal all needed resources to render effective our discharge of this manifold and complicated duty.

How could it be otherwise, we may well ask, when we reflect upon the precious character of the services which a University is called upon to render to the people? In the first place, it opens a career of great usefulness and attractiveness to a considerable and rapidly increasing number of their ablest men. Nor can we estimate the value of this body of men by their number, or by their apparent earning power. A great University is an important factor in the material prosperity of even a great city, and it would be difficult to estimate the actual money-value of their respective Universities to Berlin, to Paris, or to Edinburgh. But infinitely beyond any such computation is the value of a body of men of the highest distinction and reputation, who are conscious of their great influence upon the community, and who are proud and fond of their work with a pride and affection which could not be secured by the largest salaries in the land. Most of these men are underpaid, as judged by any standard you choose to erect; but I am not pleading to-night for larger salaries for them. A growing consciousness of the value and nobility of their work will surely evoke from a grateful community more adequate remuneration. For, in addition to their direct instruction, they stand before us as eloquent witnesses to the undying reality of ideals; as embodiments of unselfish devotion to the highest aims; and as teachers of the truth for the sake of truth, and of culture for its influence on the divine in human nature. Many of these great men are poor in this world's goods; they are often unpractical; they seem of small value in a commercial sense; but I tell you they are happier, more honored, more beloved, and more powerful for good, than many who could buy them out a hundred times over. And if our great, free and popular Universities open such a career even to the poor man, what splendid opportunities do they offer to him who combines, with a love of knowledge and of teaching truth, the possession of large means to prosecute in-

vestigation, to foster genius, and to enlarge facilities for research! I declare that it seems to me impossible to conceive of careers more delightful or more full of wholesome stimulation and excitement than those of such men as Asa Gray and Henry Draper, who have passed from us, but whose achievements remain imperishable; or of such as Leidy and Alexander Agassiz, who are with us, we trust for long years still, to illustrate what can be accomplished by the devotion of all resources to the pursuit of truth, and to strengthening the bulwarks of knowledge. The monuments of these men are to be sought not only in their writings and their discoveries, but in the lives of thousands of their students, to each of whom their character and their example have become an ideal and an inspiration.

The chief function of our Universities is still the direct teaching they provide. An association of men, however eminent, merely to conduct examinations and confer degrees, seems to have little of the vital principle of a University. Such contrivances may be useful, and even necessary, when Universities are fenced in with exclusive tradition and prerogative. But, although with us the opportunity for non-resident study may be too little accorded, it is, and I hope always will be, the case that our Universities are true centers of instruction and original research on the part both of teacher and student. Just as it does not require that a College shall cover the whole field of undergraduate work to be a College of the highest rank, so it is certainly not necessary that the entire philosophic faculty and all the professional faculties shall be represented in an institution to entitle it to the lofty name of University. But it is necessary that the tone and atmosphere of the place shall be that of freedom and independence, of freedom from prejudice, but of loyalty to truth; that the influence of great men laboring with whole-souled devotion shall permeate it; and that the stimulus to original thought and research shall be as keen as the inducement to adopt the words and thoughts of masters is fair and open.

Our American Universities are, as Bryce says, truly preserving this ideal; and whether they deal with pure abstract science, or with the most practical or professional branches,

this free spirit is maintained. Thus, without violating the University principle, it is possible to meet each successive want of the community, and to develop, as though from motives of mere practical policy, while really following a pure theory of evolution. Who, indeed, can draw the line between the theoretical and the practical, when the abstractions of to-day in higher mathematics, in physics or in chemistry are embodied to-morrow in an engine, an electric motor or a new drug?

It seems natural to us, therefore, to see, flourishing side by side, the faculty of philosophy and a whole series of professional schools. And as each new profession, in the progressive elevation of industry and subdivision of labor, gains the recognition of the community, it is felt to be incumbent upon the University to provide the most advanced and complete instruction to fit men and women to enter upon it. This recognition precedes University action. The University teachers almost invariably stimulate and mold public opinion. How long have schoolmasters waited for any due appreciation of the difficulty and dignity of their function without the existence of a single school of pedagogy on this broad continent! But the germinal idea is planted; the subject claims attention; its importance is conceded; and, while we are speaking, the necessary steps are being taken in many places to supply the need. And again, how slow has been the public recognition of the fact that Universities are teachers, not only of intellectual but of moral and religious truth, and that the utterances of our great Universities count with enormous weight on the side of Christianity! I am assured that no arguments adduced by the leading men of our churches have gone so far to confirm faith in the inevitable and unalterable harmony between religious truth and scientific truth as the temperate and deliberate utterances of some of our great scientists, embodying the results of utterly impartial and critical study of the book of Nature, written by Nature's God. And have we not only now at last begun to consider the Christian religion as a branch of study, demanding the fullest recognition and provision in every University system? Can it be otherwise regarded, when we reflect upon the intensely human interest of the subject, from its historical and critical sides; the

rare value of sacred literature from a rhetorical and philological standpoint; the supreme importance of its data and evidences as the basis of psychology, of ethics and of faith in God? Happily, the day of recognition has come, and I believe that few developments of University work have been more rapid than that which will place this great study in its proper prominent place in every such institution.

I have unavoidably made allusion to the question of the higher education of women. It is impossible to ignore it in dealing with the larger and broader relations of the University with the community. There is ample room for honest difference of opinion about the exact arrangement of studies best for girls and young women. Have we decided this position as regards male students? and where can we yet find adequate data to determine it for the other sex? It may take ten or even fifty years to settle the fundamental questions involved, but there are certain preliminary matters upon which the evidence seems already conclusive. The only essential one is the established truth—as it seems to me—that thorough education, carried to the full extent of the University system, but carried on with strict attention to proper hygienic details, is beneficial to the physical as well as to the intellectual development of women; is altogether consistent with subsequent happy and complete womanhood, and is readily within the powers of a large proportion of young women.

If, as I believe, the accumulated evidence justifies this statement, it should be made freely, without any regard, on the one hand, to the hypothetical future invasion of the so-called realm of man by emancipated woman; or, on the other, without the least idea of implying a conclusion that it is the duty of any or of every College to open its doors to students of both sexes alike. The question of the advisability of complete coeducation in undergraduate College work seems to me attended with certain grave difficulties, but it will be decided finally only after a much more extended study of the subject in all of its phases has been made than has yet been possible. Until that decision has been reached, each College will be governed by prudential motives or theoretical views in choosing its own line of

action. But when we come to consider the higher, real University work, it seems to me extremely difficult to defend the exclusion of women from the fullest participation in it. We should be dealing then with selected students, of more mature minds and of more serious purpose; with much smaller numbers in each class, while the teacher has more ample time for personal attention to each student; with a system of study of great flexibility, encouraging independent individual investigation, and allowing wide variation as to hours and to length of curriculum; and, finally, with exceptional and costly facilities, such as great libraries, large museums, and laboratories for special research, which can scarce be found, just as the eminent teachers requisite to conduct such advanced instruction can scarce be found, save in connection with our great Universities.

For, thirdly, it is essential to the relation of the University to the community that at least some of its strongest teachers shall not be burdened with so much work in the class-room as to leave but little time or energy for original research, for authorship, and for the close personal instruction of a limited number of advanced students. In the rare cases of Universities now existing, or which are likely to be founded, where no College department is provided, this question does not arise; but it is of the utmost importance that the community, and the trustees of our Universities which have such undergraduate departments attached, should understand clearly that liberal provision must be made for many eminent teachers who seemingly give few hours of instruction as set down on the roster, and who possibly have but few students in their courses. For, in reality, they are doing with their whole might an educational work of the highest importance, advancing the borders of knowledge, accumulating precious stores of material for future workers, diffusing throughout the community the largest and highest conceptions of literature, of art and of science, and inspiring now and again a rare soul with the divine enthusiasm for truth which fills themselves, and which renders its possessor a leader in the march of civilization.

And, lastly, it must be clear that a University which is thus striving to fulfill its mission and to do its whole duty by the

College and the fitting-school, which lie below it, and by the community which lies around it, does inevitably become, in a special sense, the true intellectual center and heart of that community, however large and extended.

Noblesse oblige: a spirit of impersonality, of disinterestedness, of absorption in a great cause, comes to pervade its every department. The faculties of the professional schools vie with one another in the elevation of the standard of the institution and in self-sacrificing devotion to the discharge of duty. The contagion of contact with such life is irresistible. Detached schools may, temporarily, through the efforts of exceptional men, attain deserved fame and prosperity; but in the long run the schools connected with great Universities draw the strongest men, because they offer the highest prizes, and because the spirit which pervades them is fascinating to natures of lofty ambition.

Following such men come inevitably precious collections, literary, scientific, artistic, so that there soon forms around the University an accumulation of libraries and museums of incalculable value in teaching and in original investigation. Far-sighted collectors see clearly that the treasures they have brought together with such loving, patient toil, and at such heavy cost that they seem almost as near and dear as their heart's blood, can nowhere else be bestowed so as to secure the fullest measure of appreciation and to accomplish the largest and most enduring good. Thus it comes about that the only true conception of the University is not that of a single institution, but of a federation of all agencies to promote the intellectual life of the community; and how fortunate is that community where this broad conception of the University obtains, so that, rising above all local jealousies or rival claims for pre-eminence, the leaders of thought combine to secure such co-operation and concentration of kindred institutions of learning and science as to create a vast organization capable of attracting to it all that is wise and good, and of projecting its influence with convincing force through every class of society.

It is needless to say that, if our Universities are to fill this

position, they and the institutions which aggregate about them must have large powers and unstinted means intrusted to them. For obvious reasons, it may be expected that the most fully developed Universities will, in the long run, be found for the most part in or near great cities. Think then of the difficulty and cost of securing enough territory. How rarely will such an opportunity happen as did here to us, so that by a series of happy movements, aided by an enlightened policy on the part of the civic authorities, we have been able to acquire about forty-two acres near the heart of a great city and in so favorable a position that ere long it will be the most accessible point for a vast surrounding population, numbering millions! And yet, only last year, we were compelled to pay $150,000 to secure the final portion of this property by purchase from the city in open market. Every dollar of this had to be borrowed for that special purpose, and an addition of nearly $7,000 per annum is made to our fixed charges merely in order that we may provide space for future generations to locate the new buildings which the growing needs of the community will compel the University to erect.

Think of the suggestions which are continually recurring in favor of the taxation of academic property. Gracious Heavens! is there any danger of a College growing too rich? Do not the annual reports of every such institution show that they are practically public charities, conducted with rigid economy in the sole interest of the community, served by eminent men who are scandalously underpaid, and managed by busy men who give to them largely of their scant leisure, and no less largely of their means? Are there not in every considerable town individuals whose single wealth exceeds the total property of any College or University in the country? Is it good policy—is it sound common sense—to draw blood from the very heart of an organism, hoping that in some uncertain way it may be restored at the periphery?

Observe the alarming frequency with which breaches of trust are recorded in commercial circles, and then consider the large number of special endowments, and trust funds for specific purposes, held by our Colleges, and note that the slightest

infraction of the conditions imposed or the least violation of contract can hardly be said ever to occur. We are fulfilling here with scrupulous exactitude the conditions of trusts accepted much more than a hundred years ago; and the same is true, according to its age, of every College in the land.

There is no American University whose total income at present exceeds $500,000, nor whose entire property reaches $10,000,000. In many cases, there are legislative restrictions which forbid them to hold property beyond a certain figure, so that at any time the wise and beneficent provisions of a testator may be jeopardized or actually lost to the community; whereas, if the conception of the University I have striven to bring before you in this sketchy and informal fashion be correctly grasped, it will be seen that it would be wholly safe, and, in the interest of the people, far more reasonable and politic, to favor in every way their accumulation of wealth.

There are half-a-dozen Universities to-day in America, each of which could spend with infinite advantage to the nation an annual sum of $10,000,000; and I cherish the hope that ere another century has passed there will be more than one whose productive property will be fully $100,000,000. That this hope is not chimerical, the magnificent benefactions of the present day demonstrate: that it is not opposed to sound policy is surely shown by the ceaseless fidelity, the strict business thrift, and the broad catholic policy with which the enlarging funds now intrusted to our Universities are administered. Let us steadily uphold the largest conceptions: time and patient labor will realize them; and the future will confirm our prediction that, among the mighty forces helping to protect civilization and to elevate society, none will be more grandly effective than our great American Universities.

He then introduced President-elect Seth Low, of Columbia College, who made an exceedingly interesting address, recalling his impressions of Columbia in his student days, and speaking of the advances made in recent years and of the demands of the near future.

Ex-President White, of Cornell University, was then intro-

duced, and spoke eloquently upon the modern conditions of university life, commending the cultivation within due bounds of physical education, and expressing his hearty approval of the co-education of the sexes.

A collation was then served, participated in by the delegates of the several societies and a number of invited guests.

CHAPEL OF THE UNIVERSITY, Saturday, Nov. 30, 10 A.M.

The Convention re-assembled, President Low in the chair, who announced the conference on the Significance of the Bachelor of Arts Degree, and introduced as referee Professor Edward H. Griffen, Dean of the College Department of Johns Hopkins University, who read the following:

October 17th, 1889.

* * * * * If I had been present I should have asked leave to present to your consideration some thoughts respecting the baccalaureate degree, but as I cannot attend, on account of absence from the country, I have requested Professor E. H. Griffin to say a few words in my behalf.

The points to which I should have directed attention are these:

1st. The American propensity to multiply academic titles so that the real significance of a degree is obscured.

2d. The tendency to confer the baccalaureate degree in so many forms and phrases that its meaning cannot be discovered even from the name of the institution which confers it, but must often be worked out by a study of catalogues constructed in different orders of complexity.

3d. The enumeration of the manifold forms of the baccalaureate degree now given in this country.

4th. The historical significance of the bachelor's degree as marking attainment of the first grade in the fellowship of scholars—a grade which may be attained in any faculty of a university, arts, medicine, theology and law.

5th. The value of a certificate the meaning of which is obvious at first sight, considered from the point of view of the holder of a diploma, and, secondly, from that of the public.

6th. The importance of restoring, if possible, the baccalaureate degree to an honorable significance before it is altogether lost.

7th. The importance of acknowledging that it is not essential that any one curriculum should be followed in order to attain the degree of bachelor of arts.

8th. It is essential that the candidate who receives that degree should have received much instruction in (*a*) ancient and modern languages and literature, (*b*) in mathematics, (*c*) in the natural and physical sciences, and (*d*) in historical and moral sciences.

9th. It is also essential that the candidate should pursue these studies in a public institution, under competent instructors, for a definite period, in a systematic way, subject to examination, the results of which are to be recorded, proclaimed and certified to by a formal diploma. * *

After reading the letter, Professor Griffin spoke as follows:

That the Baccalaureate degree has lost something of the "honorable significance" of which President Gilman speaks, there can be no doubt. A recent writer in one of our magazines declares that "A.B. is as meaningless an abbreviation as exists." This, we are glad to know, is an exaggeration, but it is an exaggeration which contains an uncomfortable element of truth.

So far as it is true that the Bachelor's degree has declined in dignity and value, the evil is a serious one. In view of its historical significance, the interests of learning and the credit of the fellowship of scholars require that this title, which marks the completion of a defined stage or period of training, should be kept in its original repute. It is a grave injustice that one who has gained the degree, at great expenditure of money, time and labor, should find that others have gotten it upon so much easier terms that it becomes almost worthless as a guaranty of acquisition. The public have a right to assume that learned distinctions are bestowed in good faith, and upon some basis of common understanding, and ought not to be compelled to go back of academic titles to find out what they mean. Whether we consider it from the point of view of the public, or of the individual, or of the general interests of learning, few academic questions are of greater consequence than the proper significance, and most effective defence and maintenance of the Bachelor's degree.

The causes which have contributed to this loss of consideration are—some of them, at least—obvious.

As is well known, the institutions of higher learning first established in this country were modelled, not after the English universities, but after the English colleges. This was inevitable under the circumstances, and the American college has certainly shown itself well adapted to the conditions of our national life. As respects academic titles, however, the system has had its drawbacks. In Great Britain and Ireland there are, I believe, eleven institutions conferring degrees; in the United States there are about 400, not counting colleges for women, of which there are, perhaps, 100 exercising this prerogative. These institutions are, of course, of all grades of merit. Some of them are not greatly unlike the college in the Far West, of which Professor Bryce speaks in the "American Commonwealth," whose president had much to say about the views of his Faculty, and what his Faculty were going to do—the "Faculty" consisting at the time, as it appeared, of that dignitary and his wife. A peculiar infelicity has attended our system as applied to honorary degrees—as in theology and law—these being given by institutions which offer no instruction in these subjects. An eminent American composer is said to have declined the doctorate of music conferred by Yale, on the ground that as the university did not recognize this subject in its system of education it was presumably incompetent to pronounce judgment about it. However uniform and thorough might be the standard of acquirement theoretically established by our colleges, their inordinate number, involving wide diversities of scholarly and teaching power, must prevent their certificates of graduation from bearing anything like a uniform significance, in respect to the amount and quality either of the instruction offered, or of the proficieney attained.

So far as the Bachelor's degree has suffered from this cause, there is probably

no immediate remedy. The suggestion occasionally made that the colleges of a State, or of a larger extent of territory, might, for certain purposes, affiliate themselves into a kind of university, and bestow degrees through a common board, is not likely to be received with favor. It is possible that something may be done toward the creation of a public sentiment unfavorable to the endowment and chartering of unnecessary institutions. But the main reliance must be upon such a gradual increase of resources and elevation of standards as shall diminish the evils which cannot be wholly removed. If an agreement of theory and practice could be reached among our most influential institutions in regard to the Bachelor's degree, this would do more than anything else to determine usage, and to fix the connotation of the title.

In looking over the reports of the Commissioner of Education, one is struck with the fertility of imagination and invention displayed in academic titles. The following enumeration of variations of the Baccalaureate title is probably not exhaustive:

Bachelor of Arts, Science, Philosophy, Letters, Laws, Divinity, Sacred Theology, Surgery, Music, Painting, Pedagogics, English, English Literature, Latin Letters, Agriculture, Scientific Agriculture, Agricultural Science, Architecture, Engineering, Civil Engineering, Mining Engineering, Metallurgical Engineering, Mining Metallurgy, Chemical Science, Mechanic Art, Veterinary Science, Domestic Art. The colleges for women add a new and pleasing element of variety from the fact that it seems to be supposed by some that the word "bachelor" is a designation of sex, and so we have Licentiate, Laureate, Graduate, Proficient, and, in more distinct antithesis to Bachelor, Maid.

The first criticism that one passes upon this list is that most of the titles indicate professional, rather than liberal, acquirements. The Bachelor of Science, of Philosophy, of Letters, may have pursued studies entitled to be called liberal; the same may be true of the Bachelor of Laws, Divinity, Music, of others in the list; but it is certain that the holders of most of these degrees have acquired a technical rather than a general training. Why, then, it may be asked, should they lay claim to the title to which usage has attached a different meaning? Is it historically just, or is it practically wise, to disregard the distinction between a technical and a liberal education by applying the baccalaureate title indifferently to both? Most of the colleges represented in this Association distinguish between the Bachelor's degrees of Arts, Science and Philosophy, and the technical degrees, Practical Chemist, Mining Engineer, Civil Engineer and the rest. It is important that those who hold to the old idea of a broad training in fundamental studies, precedent to specialization, should do this.

A question might arise as to what modifications of the Baccalaureate title should be considered permissible under this principle. The degrees, Bachelor of Science, Letters and Philosophy, are so well established that it is probably useless to make any objection to them; yet it is a fair question whether the subdivision is of any advantage. If these degrees do not certify to a course of study properly ranked as liberal, they ought not, according to this view, to be conferred; if they do, would not the simpler, more historical, more intelligible way be to comprise them all under the Bachelor of Arts? The contrast between the sciences and the humanities it may be well to recognize by retaining the Bachelor of Science; but

Bachelor of Letters and Bachelor of Philosophy are of such indeterminate significance that it would be a relief to have them abandoned. Is it worth while to retain degrees whose significance no one can tell without knowing the institution which conferred them, or then without a careful consultation of the catalogue? It seems to me that the Baccalaureate degree would be greatly augmented in dignity, if it were conferred only under the title Bachelor of Arts, or, at most, with the variation Bachelor of Science.

If the reduction of all the non-technical degrees to a single form, or to two forms, were to be accomplished, it would be necessary to reach a more definite understanding than at present exists as to what constitutes a liberal education. The proposition laid down by President Gilman, that "it is not essential that any one curriculum should be followed in order to attain the degree of Bachelor of Arts," would now be generally conceded. The rigidly exacted course of study which formerly prevailed in all our institutions is now admitted to be impracticable. The effort to adapt it to the demands of the new sciences, and the modern languages and literatures, made it so fragmentary and kaleidoscopic, so far impaired its disciplinary power, that some change was acknowledged to be inevitable. The only difference of opinion now is as to what subjects shall be insisted upon. The modifications of the Bachelor's degree first named (Bachelor of Science, Philosophy, Letters) ordinarily indicate that one, at least, of the classical languages has not been pursued. The absence of this acquisition seems to render the Bachelor of Arts degree unsuitable, and, in default of a scientific specialty, one of the other titles is resorted to. If it were decided to abandon these, what could be done for the class of students for whom they were designed? This must, of course, depend on our view of what is necessary to a liberal culture. Why not give to those who have studied no ancient language such certificates and titles as best describe their work, and to those who have sufficiently pursued one, concede the full rank of Bachelor of Arts?

That a liberal education may be properly held to require a wider historical and moral horizon than the modern tongues alone can give, can hardly be disputed. An acquaintance, at first hand, with the manners and sentiments of a civilization remote from our own, one unmodified by Christianity, is so pre-eminently liberalizing, so quickens one's power of intellectual sympathy, so deepens one's sense of the unity of history, so enlarges the range and perspective of one's thoughts, that it may properly be made the differentia between a general and a special training. But are two ancient languages necessary for this? Is it even necessary that one of the classical languages should be pursued? Would not Semitic or Sanskrit studies, if these should happen to be unaccompanied by Greek or Latin, secure the same end? The main thing is to get a genuine hold upon a distant past.

The literary and æsthetic reasons for the study of the classical languages, that is, of Greek, which is the real issue in the case, it is not necessary to belittle the force of. But how few of our candidates for the degree of Bachelor of Arts ever acquire any refinement or delicacy of Greek scholarship! How few teachers—happily there are signal and distinguished exceptions to this remark—teach Greek otherwise than as a grammatical drill, or, at the best, a philological discipline! Were ever the Hellenic spirit and form better reproduced than by Keats, who could not read Greek at all?

It is not, as it seems to me, easy to justify the insistence upon both Greek and Latin as essential to a liberal education. We may be in danger of displaying in behalf of Greek studies something of the same excessive deference to traditionary habits and standards which worked so powerfully against their reception in the fifteenth century. It is undeniable that the majority of men in two, at least, of the so-called learned professions—law and medicine—in editorial work and in politics, are not, in the academic sense, liberally educated men. Is not this due, in part, to the fact that we have been too rigid at certain points, making our education seem remote from life and pedantic? If it should seem wise to bestow the Bachelor of Arts degree without Greek, we could simplify our nomenclature by dispensing with the degrees of Bachelor of Letters and of Philosophy; we could carry to full graduation some who now pursue partial courses of study; we could obviate criticisms, which proceed not always from so-called "practical" men, but often from persons abundantly qualified to form an opinion, graduates, not rarely, of our own institutions.

But while this additional freedom may wisely be conceded, it is of the last importance that we insist upon those fundamental subjects which any rational theory of a liberal education must include. President Gilman enumerates these as follows: "It is essential that the candidate who receives that degree should have received much instruction in (*a*) ancient and modern languages and literature, (*b*) in mathematics, (*c*) in the natural and physical sciences, (*d*) in historical and moral sciences." I need not stop to show why these four classes of subjects are essential; we are not likely to disagree about that. Experience has shown, what one's knowledge of human nature would lead one to expect, that young men, left wholly to themselves, will not apportion their time equitably between these different interests.

Professor West, of Princeton, took the trouble, three or four years ago, to summarize the choices of elective studies made by members of a recent class at one of our leading colleges. A more careful administration of the system probably prevents, at the present time, such extreme abuse of liberty; yet these facts are instructive as an illustration of a danger against which we need to guard. The first man in standing omitted two of the classes of subjects named by President Gilman, taking no course in mathematics or in science. The second omitted nearly three, taking no course in mathematics, in science (except botany), in philosophy, history or political science. The third took no science, and no philosophy. The fourth took no course in philosophy, history, political science, classics, modern languages. How can we consider a man liberally educated who has studied, during his collegiate residence, no modern language, no ancient language, no logic, psychology or ethics, no history, no political or social science? Omissions of like significance occur in the case of each of the ten highest men, while the men at the bottom of the class show a marked inclination to the easiest subjects. We cannot plead the example of the German universities, for we have no such preliminary training as the German gymnasia afford. It is obvious that unrestricted liberty of election cannot be permitted. No degradation of the Baccalaureate degree is comparable to that which would come from the general adoption of such a system in our colleges. The degree has, at present, an approximate uniformity of meaning. This would speedily and totally disappear.

The suggestions which I offer, on the basis of President Gilman's paper, are, then, these:

(1) Diminish the evils growing out of the number of our colleges, and the inferiority of some of them, through an agreement among the strongest and best, which would have the force of an authoritative example.

(2) Distinguish sharply between the technical and the Baccalaureate degrees, reducing the latter to one or, at most, two forms.

(3) Relax the requirement in regard to Greek, accepting one ancient language as sufficient for the Bachelor of Arts degree.

(4) Allow no elections on the part of students that will prevent a suitable distribution of attention between the four great groups of subjects which have been named.

He was followed by President Merrill E. Gates, of Rutgers College, as co-referee, who said:

THE VALUE OF THE BACHELOR'S DEGREE.

An academic degree is "the grade or rank to which scholars are admitted, in recognition of their attainments, by a college or university." Obviously, if the same degrees are used by colleges and universities which are in fellowship with each other, these degrees should have as nearly as may be equivalent values. Some differences there must always be, but differences so radical that a Bachelor of Arts from one so-called college would hardly be admitted at another to a course of study which after four years should lead to the same degree, is manifestly subversive of true value for degrees. In proportion as the profession of teaching becomes more distinctively a learned profession, degrees must come to have with us a higher value for the purpose which led, historically, to their first use, viz., "to prevent unqualified persons from teaching," and to prescribe an initiatory discipline of definite value for all who were to be admitted to the fellowship of liberally educated men, particularly in the learned professions.

If we distinguish three aspects of academic degrees, in each of these aspects we shall see the need of a uniform meaning and value for a given degree. Degrees have been looked at as, 1, "Certificates of attainment, ordinary or honorary. 2, Licenses to teach a branch of knowledge with which the holder is affirmed to be acquainted. 3, Licenses to practise a certain profession."

This paper maintains—

First. That honorary degrees should be given less frequently, with more attention to their academic origin and their scholarly import, and only on grounds reducible to writing and defensible before bodies of fair-minded scholarly men.

(Here the speaker submitted the regulations which for the last three years have governed the conferring of honorary degrees at Rutgers College, where the ground for conferring the degree is publicly read when the degree is conferred.)

Second. Licenses to practise law or medicine, implied in the degrees M.D. or LL.B., should require much more of liberal education and scientific training on the part of those who are admitted to the professional schools which grant these degrees.

Third. As the profession of teaching is elevated in responsibility, influence, dignity and emoluments, more systematic supervision and testing of the teacher's qualifications must be secured, and degrees and grades in this profession must be defined and respected, although with due regard to that inborn *teaching-gift* which no written or oral examination can test, but which is so quickly felt by students, and so joyfully and promptly discerned, where it exists, by intelligent supervisors of educational work.

Fourth. As to ordinary "certificates of attainment," the Bachelor's degree, as given by the colleges and universities of this Association, should have an approximately uniform value. Absolute identity in the course of study is not to be sought; nor would anyone advocate a return to the fixed curriculum of thirty years ago for any course or any degree. But does it not seem clear that whatever may be rendered defensible or necessary by the different condition of newer communities, the circle of colleges and universities here represented is not called upon to teach a little of everything to students in no way qualified for higher instruction in anything, and to give to students so taught a "degree" of some kind?

As to the forms of the Bachelor's degree to be given for non-professional studies, can there be a reasonable demand for any beside those of A.B., B.S., and possibly Ph.B.? If the degree of A.B. in America is not to imply that the man who receives it knows something of the language, literature, institutions and life of *both* Greece and Rome, certainly it ought to mean that he has with some degree of thoroughness pursued one or the other of these studies. It does not seem to me that the study of the Semitic languages or of Sanskrit, in the paper last read suggested as a substitute for Latin or Greek, could properly be so accepted. "The reign of law," the "sense of proportion," and the emphasis placed on the growth of social institutions are ideas so strongly impressed upon the student in any proper study of Greek and Roman life and literature, and these ideas are of so high a value for the heirs of the history and the culture of Europe, that Greek and Latin ought not to be supplanted in a liberal education by any study of the widely different life and literature of the Orient. As to the degree of "Bachelor of Literature," certainly it ought not to be borne by anyone who is entirely ignorant of the languages and literature of Greece and Rome, which formed and still inform the literatue of the modern world. My own judgment and preference would favor holding the degree of A.B. to its historic significance, as implying such liberal culture as can be obtained only by the careful, sympathetic, continued study of the classical languages of antiquity. In this way alone does the student acquire the power to think and feel from another standpoint than that of the too-imperious Present. Freedom from the tyranny of the "*Zeit-Geist*" is best attained, I believe, by the classical training. Nor will any wise man, however strong his bias toward other lines of study, refuse weight to the testimony of the German universities as to the higher value of the training of the Gymnasium as compared with that given by the Real-Schulen. When advocates of "elective" courses only, in pressing their views, insist that students who leave the German universities, as a rule, are much more thoroughly and broadly educated than are the graduates of American colleges, they seem to forget that the German students have, without exception, been put through the discipline of a fixed curriculum (more rigidly fixed than that of the old-fashioned American college) in their course in the Gym-

nasium. The German university receives from the Gymnasium students who have already reached a degree of discipline and scholarship which could not be attained in America, save by rigid adherence to the old fixed curriculum of our better classical colleges through the Sophomore and much of the Junior year. The fine enthusiasm and the liberal culture which mark the German universities are attained only with students who have acquired scholarly tastes and habits, and mental breadth, discipline and will-power by the thorough training of the Gymnasium in a prescribed course which includes the study of the languages and the life of classical antiquity.

If the degree of A.B. were bestowed only on men who had studied both Latin and Greek, with some fixed minimum of work in the required groups of studies (named in the last paper) which seem to us all essential to a liberal education, then the degree of Bachelor of Philosophy, while it marked larger acquisition in certain other of these groups, might be bestowed on students whose attainments were largely in philosophy and modern literature, with either Latin or Greek, or, if without either of these, still with "a general liberal culture," acquired by following "those aptitudes which carry us to the humanities," to use Arnold's phrase.

The degree of Bachelor of Science, on the other hand, while it should include attainments in mathematics, in the historical and moral sciences, and in at least two modern languages (including the English), with a careful study of their literature, would mark the student who had attained a general, liberal culture through "following the group of aptitudes which carry us to the study of nature."

The college over which I have the honor to preside (Rutgers) confers the Bachelor's degree in but two forms. The degree of A.B. certifies to the prolonged study of both Latin and Greek; but it requires only one term's work in either after the Sophomore year; and beside required work, it offers elective courses in Sanskrit and Hebrew, and for advanced work in Latin and Greek, in the modern languages, the natural sciences, mathematics, history, constitutional law and philosophy. The degree of B S. is given only on the completion of a four years' course of study. The study of English is continued throughout the course. In the Freshman year, by a severe course a working use of French is obtained, and thereafter French text-books and French periodicals are freely used by the class in scientific and historical studies (*e.g.*, Ganot's *Traité de Physique*, Paris edition, is used in the study of Physics; *Guizot*, *Blanqui*, etc., are studied in the French; and to a limited extent German is used in the same way in the Senior year). The courses in the School of Science divide at the end of the first year, specializing into (1), A course in mathematics and civil engineering; (2), a course in chemistry and its applications; and (3) a course in electricity. Students in all these courses, however, hold steadily to so much work in mathematics, history and philosophy, as well as in natural science, that the courses are in every sense liberalizing courses. These courses lead to the same degree, B.S. The degree of Civil Engineer is not given in course, but only after post-graduate studies and successful work in engineering.

But the question before us is not a mere question of detail. It is a question of the spirit and purpose which shall animate our colleges and universities.

Is broad and thorough scientific culture, for a considerable body of our citizens, essential to strong and noble national life? Are we ready to agree with Aristotle and Plato that not merely to live, but to live nobly, is the aim of the State—of

organized social life? Representing the group of colleges in one of the oldest settled and most influential portions of our country, do we believe in a higher education which broadens the young man's outlook and liberalizes his spirit, which gives him possession of the full round of his mental and moral powers, before it raises the question of the special profession, or undertakes to train the youth in what the Germans call *Brod-Studien?* So far as the American idea of the university may be said to be shaping itself among us, is it the idea which makes of primary importance the advancement of science, the prosecution of studies and investigation in the pure spirit of science, for the acquisition and coördination of knowledge, and with the aim of bringing those who pursue it to a point of view where they shall "see nothing alone," but all things in their relations—is this the prominent idea? Or is there clearly discernible in America a tendency strong and marked to subordinate this higher conception of the university to the work of special professional schools? Is the higher conception of the university, as a center for the *studium generale*, forgotten, crowded into a secondary place, while specialized lines of professional study are pursued simply as means to an end, by bodies of young men who have not received that breadth of outlook and that knowledge of their own powers which can come only from a liberalizing course of study?

In short, do we believe in college training for its own sake, for its effect in developing the powers entrusted to a man? Or do we apologize for, or feebly defend a college course on the ground that it *will pay* in dollars and cents, tacitly conceding that if it did not so pay it would be a failure? Is there need in our country of more, or of less of the cultus of learning for its own sake? In our nation and in our time, is there any serious danger that we shall be characterized by what Sydney Smith has called "the safe and elegant imbecility of classical learning"? Have our most censorious critics ever written down as among our national failings, the tendency to over-laborious and too long-continued efforts after true scholarly and artistic excellence for its own sake? Do too many Americans devote their entire life to the attainment of exact knowledge and the clear apprehension and the exposition of truth?

President Gates then offered the following resolution:

"*Resolved*, That a Committee of five be named to confer on the requirements for the Bachelor's Degree in Arts at the colleges and universities in the States here represented, and to report to this Association at its next annual meeting: (1) what definite suggestions it would offer as to a uniform minimum of requirements on each of the four great groups of studies for the Degree of a Bachelor of Arts; and (2) what forms of the Bachelor's Degree it would recommend as advisable at these institutions."

The resolution was seconded by President Adams and Professor Marquand, and unanimously adopted.

Professor Henry F. Osborn, of Princeton College, read the following paper on

THE FELLOWSHIP SYSTEM IN AMERICAN COLLEGES.

THE American system of college fellowships is an institution of the English in little more than the name, our fellowships having from the outset been made as practical and effective as possible by rules of open competition and short tenure.

Its introduction is comparatively recent: Harvard was slightly in advance of Princeton, establishing three fellowships in 1868–9, and now offering fourteen.*

At Princeton, starting with four fellowships of $600 each in 1869–70, as shown in the accompanying tables, the fellowships have, since 1873, varied from six to ten. For the present year eleven appointments have been made, and the Fellows receive, in the aggregate, $4,400. At Yale the first two fellowships were founded in 1873–5; there are three offered at present. There were two offered at Columbia in 1874, which number has now been increased to seven. The establishment of eight fellowships at Cornell is also of recent date. The opening of a large number (20) of university fellowships to graduates of any American college has been one of the most distinctive and successful features of the Johns Hopkins University since its foundation in 1876.

The Fellows thus constitute an important body in our larger institutions. Their support is an expensive matter, and the question as to the wisdom of extending this system and the mode of regulation which will produce the best results is one of a direct practical nature. Are the trustees of university funds, which we may assume are always limited, justified in distributing among six Fellows an annual sum of, say, $3,000, which might otherwise be used to establish a full professional chair, or two associate professorships? Which instrument will bring the best educational return? Undoubtedly the Fellows will swell the roll of students, and with American number-worship we are all subject to the feeling that this is a gain. But by return I, of course, mean a higher general standard of scholarship and the graduation from the college and university departments of men of higher intellectual order.

RESULTS OF THE FELLOWSHIP SYSTEM.

I may be pardoned of any college egotism if I look at the question statistically from the Princeton record. After a very careful study and investigation into the practical results of the fellowship system during the first sixteen years of Dr. McCosh's administration, I am an enthusiastic advocate of it. I not only believe that a body of Fellows are essential to the intellectual life of an institution, but that this is the best if not the only method by which the university can be *built* up, and by which the spirit of an institution, if it has any distinctive spirit, can be carried abroad over the country. By the sixty-five COLLEGIATE FELLOWS, the following professions have been chosen:

Law	12
Ministry	8
College professors	30
Tutors, instructors, school principals, and teachers	10

* President Gates informed the writer that he believed fellowships were introduced still earlier at the University of Rochester.

In all there are forty teachers out of sixty five ex-Fellows.

Among the 1,400 graduates of this period—1870–1886—*seventy-five* appointments to college and university professorships have been made. Twenty-eight of these appointments, including the majority of the appointments in the institutions of the first rank, have been assigned to collegiate or university Fellows of the college. Altogether about 40 per cent. of the Fellows are now engaged in teaching and investigation.

I have no doubt that the results of the fellowship system will upon investigation be found to be quite as encouraging in other institutions.

Purpose and Classes of Fellowships.

I wish to point out the sharp line of distinction which I believe should be drawn between collegiate prizes and fellowships. The prize is given in recognition of some result or degree of proficiency already reached by a student without any necessary reference to his future line of work. The fellowship is something more: it recognizes the ability and mental promise already displayed in the student, and is awarded expressly to encourage and enable him to continue in a special line of study and research. This distinction, it seems to me, has a direct bearing upon the problem of the best method of awarding and regulating fellowships. In the inquiry made at Princeton I think can be traced the comparatively few cases of failure of the system to the non-appreciation of this distinction both by the professor and student. I have in mind one case, where appointment was made because of a few decimals in a competitive examination. The successful competitor is now lost in the obscurity of a small western village, while his defeated opponent is professor of astronomy in a prominent university.

We may also conveniently distinguish *two classes* of fellowships. The general opinion in this country seems to be that the university must have the college as the basis. In order to keep our Bachelors of Arts in this country we are fast adopting the German standard for the higher degrees, and by common consent the Ph.D. may be given not earlier than *two* years after the B.A.

Collegiate Fellowships.—So we may award collegiate fellowships upon the basis of work done for the B.A. degree, to be held during the first year after graduation. Experience seems to show that the college curriculum rarely leaves a student with more than a superficial knowledge of any single subject. The first year after graduation the Fellow must, therefore, devote to extensive study and preparation in one department. He is still essentially a student, specializing in some line of work already begun in the college course. Here may be mentioned another fact which is apparently proved by statistics: That is, the best results of fellowship work come from students in residence, especially during the first year after graduation, as compared with the work accomplished by students during the first year abroad. This accords with the general idea that the Fellow should be a privileged student of his professor, a relation which it is not possible to form where a man first enters another university.

University Fellowships.—These should be made of a higher order. The university Fellow, while continuing in the same department of study, begins to apply his knowledge both as an assistant teacher and an investigator. Here his relations to his professor become still closer than in the previous year—it is the real turn-

ing-point in his career—bring the university fellow into the occasional supervision of small classes of Junior students, and for the first time let him take up some original investigation.

Regulations.—The regulations governing the appointment of university Fellows at the Johns Hopkins University, Harvard, Cornell and Princeton are practically similar: the fellowships are open to graduates of any American college. They are distinctly for the encouragement of original research, upon the theory that the well-equipped teacher of the present day must also be an investigator. Research requires a special training; it is one talent to acquire knowledge, another to impart it, a third to contribute to it.

The Johns Hopkins University was, I think, the first to fully appreciate that with the importation of German university ideas into our colleges, by the return of German-bred students, this threefold talent would be looked for in the professorial appointments. The greatest monument which this comparatively new university has built for itself is to be found in the Faculties of the colleges throughout the country.

Candidates should be men who have already pursued advance courses of study and are presumably qualified for the higher test of original investigation. By opening the appointments to graduates of other colleges the standard is raised. As a matter of fact, however, I believe that in the present operation of the system at Harvard, Johns Hopkins and Princeton, most of the recruiting is done from home.

The collegiate Fellows are also in most institutions elected. Princeton is apparently the only institution which has adopted the method of appointment by competitive examination, and our experience raises some doubt whether it is the best one. The ideal working of a fellowship offered at graduation in a certain department would certainly be, first, a direct stimulus to several of the abler undergraduates toward a higher standard of work, thus raising the general standard by the force of example and enthusiasm. Second, the selection of the man whose past work in quality and quantity gives most promise for the future. We find that these results while often attained are in a measure accidental under the competitive system. One, sometimes two, men announce that they intend to compete for a certain fellowship. Real competition often ceases before the examination, for about one-half the fellowships are awarded to single applicants. The special subjects assigned for examination also divert a student from his main line of college work. Again, where there is real competition, ability or promise cannot always be reckoned in percentage, and in some cases the appointment of unpromising men has been forced upon the departments against their better judgment. It may be said, why does competition in a department cease when the examination is upon subjects which would be useful to the student—even if unsuccessful? Here is the crucial defect, the examination is of necessity special, covering three or four divisions only of an extensive field. On the other hand, the competitive system has its advantages. I consider *that this method of appointment is, upon the whole, less satisfactory than that of election of the departments, after a careful comparison of the whole field of work (touching the subject of the fellowship), covered by the candidates in the Junior and Senior years. This secures a real competition, and the unsuccessful but deserving candidates could be rewarded by special honors. In most cases*

the selection of the best man is not a very difficult matter; if, however, the members of a department should not agree, or any doubt should exist, an examination could be held.

The spirit of these regulations is *that candidates for collegiate fellowships, as for special honors, shall have pursued with credit certain departmental courses; their application, made in writing early in the Senior year, shall indicate their intention to devote themselves to teaching or investigation in some branch of philosophy, including theology literature, or science; their appointments shall be by vote of the Faculty upon recommendation of the Departments.*

The general conclusion is that the American fellowship system has been well tested, and not only raises the work of the college, but is absolutely essential to the life and activity of the university or graduate department. To produce the best results, each main department should be provided with at least two fellowships: a collegiate for the first year and university for the second year after the B.A. degree. That the collegiate appointments should be local; the university general. That the university Fellows, especially, should be trained in the elements of teaching, in the laboratory as demonstrators and investigators. That the success of the system depends largely upon the amount of care and personal attention bestowed by the professor.

Prof. Horatio S. White, Dean of Faculty of Cornell University, read the following paper on

THE SYSTEM OF ADMISSION BY CERTIFICATE.

THE practice of admission to higher institutions by certificate from lower institutions is of long standing, and, in theory, is generally approved. Its advantages are manifest. It allows the student to pass naturally and normally from the school to the university without any break in the transition. It relieves him from an excessive and needless strain of preparation in reviewing anew a considerable number of miscellaneous subjects, many of which find their due place and have served their purpose in the earlier years of the school curriculum. It permits him to enter upon his university course free from the jaded feeling which often results from such a previous strain of preparation. It renders needless a preliminary journey to the university, which is frequently long and costly—the sequel of which may be doubtful, if not unfavorable—and gives the applicant at any time during the year, instead of at certain fixed and often inconvenient dates, a decision as to his actual status of preparation. It may thus afford him leisure to strengthen his weak points in advance, to concentrate his attention upon the essential branches, and to anticipate occasionally a part of the work required for entrance. It tends to knit into a greater solidarity of interest the schools and the university, and, to use a happy term of President Patton, to render more perfect their articulation.

It is true that many institutions, notably Yale and Harvard, still cleave to the older system of examination, with certain modifications. To abate the strain of preparation it has been thought desirable to divide the examinations into preliminary and advanced examinations, to be taken in successive years. And to avoid inconvenient or expensive journeys, the examinations for entrance are held simul-

taneously at various points as remote as the shores of the Pacific in the west, and in the east the banks of the Rhine. Whether these modifications are feasible or expedient for all institutions remains, however, a mooted question. Meanwhile it appears that the system of admission by certificate is gradually extending; and the purpose of this paper is to present briefly the experience of one institution, and some of the difficulties met in dealing with this system.

The chief difficulty arises from the lack of uniformity in excellence of our preparatory schools. In Germany, where the system is thoroughly established, this difficulty is practically unknown. State supervision and uniform administration have produced such a uniformity in curriculum and in the standard of instruction of the secondary schools that the diplomas of graduation may safely be taken to represent an identical level of attainment, and are usually accepted at the universities as a credential entitling the holder to the privilege of matriculation. On this side of the water this difficulty is partially obviated in various ways: in the Province of Ontario, Canada, for instance, by a provision of *uniform examinations* which requires the students at the secondary schools to take their final or graduating examinations, as it were, at the University of the Province, in Toronto, in the shape of matriculation examinations for that university. The middle, or preliminary, examinations are held at the school itself, but are uniform in character.

Students coming from such schools may, therefore, be safely admitted on certificate to our own higher institutions. The same difficulty is obviated in Michigan by a system of *visitation* on the part of the authorities of the University of Michigan by which the high schools of the State are kept under careful supervision, and only those are accredited with certificate privileges which are shown to be up to the required standard. In other Western States, and some of the Eastern States, a similar system of accredited schools, more or less carefully guarded, prevails. Other higher institutions outside of such States may, as a general rule, safely admit on certificate the graduates of these schools also.

In New York State the Regents' examinations secure a uniform standard of excellence and preparation. These examinations cover all studies required for entrance to college, and are conducted at the different schools, while the papers, previously marked by the principals, are sent for ratification to the office of the Regents at Albany. After passing a sufficient number of these examinations, the student receives a college entrance, or academic diploma, which in some schools represents a graduating diploma, and is accepted in lieu thereof. Such diplomas, including as they do a variety of subjects beyond the ordinary entrance requirements, may with safety be received at any university for the subjects which they cover.

The evolution of the system of admission by certificate at Cornell University, which is the natural outgrowth of the acceptance of Regents' documents and diplomas of State schools, in lieu of examinations, is briefly as follows:

Up to the year 1876 entrance to the university seems to have been entirely upon examination. The question of accepting the Regents' certificates for arithmetic, geography and English grammar (established in 1866), was debated by the Faculty as early as 1869 and decided adversely. In 1876 the State teachers' certificate, issued by the Superintendent of Public Instruction, and the Regents' preliminary certificate in arithmetic, geography and English grammar, were accepted instead

of examinations in the elementary branches covered by such certificates. In 1877 *graduates* of the normal schools and high schools of the State, in which the requirements for graduation were satisfactory to the Faculty, were excused from examination in arithmetic, geography, English grammar, plane geometry and physiology. In 1878 the Regents' diplomas (established in 1877), issued to graduates of academies and high schools, were accepted in place of all the six primary examinations (arithmetic, geography, English grammar, physiology, plane geometry and algebra). In 1883 the diplomas of *all* academies and high schools were placed, under certain conditions and limitations, on the same basis as those of institutions within the State. In 1886 the Regents' examinations in Greek and Latin and in Greek and Roman history were accepted as equivalents, and the diploma of the State normal schools was allowed to cover algebra. In the same year a committee on admission was appointed, primarily to admit on certificate students wholly or partially prepared at private schools or schools outside the State. In 1887 Regents' certificates in French and German were accepted on recommendation of the departments concerned. In 1888 the Faculty decided to decline partial certificates of the Regents in place of examinations. Pass cards in separate subjects, however, were to be accepted when presented as supplementary to the Regents' diplomas.

As a result of the preceding legislation it now appeared that students *partially* fitted, but not *graduated*, at schools *outside* of the State were received on more favorable terms than similar students from schools *in* the *State*. It seemed proper, therefore, to admit *partially* on certificate students from the schools in the State who might not have completed the *full curriculum* of the school. This action was, however, deprecated and criticised by the principals of the State at their various conventions. They pointed out that it was detrimental to the efficiency of their system when their students were drawn away from them, before the curriculum was completed, through the ease with which admission to college could thus be gained; that their own reputation for thorough work was endangered, and that those students who remained to complete the course were discouraged on finding their own classmates apparently a year ahead of them in college. The principals at the same time criticised the low requirements for entrance to certain courses which led the university to repeat work already well done in the schools. The justice of these remonstrances was recognized; and the Faculty, always docile in its relations with the schools, raised the entrance requirements as requested, and adopted the following resolution: "Certificates of work done at public or private schools in or out of the State will not be accepted in lieu of examinations unless the applicant has completed a *full course* in the school." During the year 1888–89 further steps were taken to consolidate and simplify the system, and the results may be stated as follows: Diplomas issued by the Regents of the State of New York are accepted in place of examinations in all the subjects required for entrance which are covered by such diplomas, including, upon the recommendation of the university departments concerned, the subjects of French and German. At Cornell University those admitted on Regents diplomas have given afterward the most satisfactory evidence of their scholarly attainments. All other diplomas or certificates are received merely as preliminary evidence that a certain course has been pursued and certain work presumably done. The acceptance of such work

without examination, as an equivalent for any entrance requirements, is dependent upon the rules for the admission of students by certificate. Under these rules the applicant must first have completed a *full course* in the school by which he is recommended, and the studies which he has pursued must be certified to in detail. All schools are thus provisionally treated in a similar manner. The test of the excellence of the work done by such schools is for the present based principally upon the quality of the work done by their students after admission to the university, a careful record of whom is kept under the title of each school. If such students do good work at the universty, we judge of the schools by these fruits. As President Adams has well expressed it, "What we want is not so many students who can pass certain entrance examinations as students who can successfully do the work after admission." That is to say, we are more concerned about securing a certain maturity of mind than specific attainments. And yet we believe that under the present system both ends are attained. The chief exception to this privilege of admission by certificate is made in the case of private tutors, or of private schools which have no regular curriculum, and fit students specially and individually for college in a variety of miscellaneous subjects. The best test of the efficiency of such schools seems at present to be the test of the regular entrance examinations. The system, however, we must admit, is still on trial, and some further modifications may yet be necessary. The criticism that it fails to discriminate sufficiently between schools, and tends to reduce them to one dead level of equality, is just, so far as the direct relations of the university to them are concerned, and would form a grave objection if the university were the centre and aim of the efforts of a number of rival preparatory institutions whose principal objects were to enter successfully as many of their students as possible. But this danger in New York State is lessened by the system of Regents' examinations, already described, which form the basis of many school examinations; and the remaining large number of schools supplying the university are scattered over the whole country from Maine to California, and are not brought into direct competition with each other. Moreover, the majority of the graduates of such schools do not go to college, and the schools must therefore fit their students for a general business career, rather than for admission to college alone. This double aim of the secondary schools is sometimes a disadvantage to them, and certainly militates against too excessive attention to the demands of the higher institutions of learning. Meanwhile the local conditions surrounding most of the schools will naturally impress them with the importance of maintaining of their own accord a satisfactory standard of excellence.

The charge might possibly be made that this system may result in lowering or cheapening the terms of admission to college. Such was undoubtedly the tendency in the earlier stages of its development. Such a charge to-day has less foundation, and a careful administration of details will probably render it quite baseless. At all events, the future workings of the system will be watched with much interest by every practical educator.

Professor J. W. Heston offered the following:

Resolved, That a Committee be appointed to consider the question of Pedagogics, and to recommend at the next meeting of this Convention some definite work in Pedagogics for the universities and colleges included in this Association. The resolution was adopted, and the following Committee appointed:

Prof. Nicholas Murray Butler, Chairman.
Prof. Edmund J. James.
Prof. Edward H. Magill.
Prof. J. W. Heston.
Vice-Chancellor Henry MacCracken.

The Committee on Nominations reported recommending as officers for the ensuing year:

President, C. K. Adams, LL.D., of Cornell University, N. Y.

Vice-President, D. C. Gilman, LL.D., of Johns Hopkins University, Md.

M. R. Goff, A.M., LL.D., of Western University of Penn., Pa.

D. J. Hill, LL.D., of University of Rochester, N. Y.

F. L. Patton, D.D., LL.D., of College of New Jersey, N. J.

A. N. Raub, A.M., Ph.D., of Delaware College, Del.

Corresponding Secretary, Edw. H. Magill, LL.D., Swarthmore College, Pa.

Recording Secretary, J. Y. Burk, A.M., University of Pennsylvania.

Treasurer, J. B. Kieffer, Ph.D., Franklin and Marshall College, Pa.

Other members of the Executive Committee:

Allan Marquand, Ph.D., J.H.U., College of New Jersey, N. J.

M. E. Gates, LL.D., L.H.D., Rutgers College, N. J.

N. M. Butler, A.M., Ph.D., Columbia College, N. Y.

William Pepper, M.D., LL.D., University of Pennsylvania, Pa., who were duly elected.

The Executive Committee presented the following report:

The Executive Committee of the College Association respectfully reports that it has held two meetings since the adjourn-

ment of the last Annual Convention. The first was held at Philadelphia on Jan. 12th, 1889, with a full attendance, at which it was reported that one thousand copies of the Proceedings have been published; the distribution of these was entrusted to the President and Secretary, and the cost of publication assessed upon the colleges represented at the Convention either by letter or in person. Provost Pepper reported promises of participation in the exercises of the next Convention from Presidents Adams of Cornell, Gilman of Johns Hopkins, Patton of Princeton, and Knox of Lafayette, and the services of these gentlemen were thankfully accepted. The substance of the programme presented at this Convention was agreed upon, details being left to the officers of the Committee.

The second meeting was held Nov. 29th, 1889, at which it was agreed to recommend that the next annual meeting be held at Princeton, N. J., in accordance with the invitation received from President Patton, on the Friday and Saturday following Thanksgiving Day, 1890, and that the Executive Committee hold a meeting at the same place one hour prior to the assembling of the Convention. It was resolved that the Secretary be instructed to prepare a roll of all the colleges which now or heretofore have participated in the sessions of the Association, and that the list be sent to all colleges within its bounds, with a notice that any college desiring admission to the Association may make application to the Executive Committee.

The Treasurer presented his annual report, of which an abstract is appended; and President Seip and Secretary Burk, the Auditing Committee, reported it as correct. It was resolved that the expense of publishing the Proceedings of this Convention be assessed equally upon all colleges now or heretofore participating in the Association, that an edition of 2,000 be printed, and that of these, 30 copies be sent to each assessed college, and one each to the College Presidents throughout the country. *Resolved*, That the publication be entrusted to a Sub-Committee, with instructions to include such of the papers read as they see fit; the Committee to be appointed by the incoming Executive Committee.

Abstract of Annual Report of Prof. J. B. Kieffer, Treasurer:

RECEIPTS.—From former Treasurer, ...	$20.95
Assessments from 12 colleges, . .	120.00
From University of Pennsylvania, ($\frac{1}{2}$ cost of Publishing Proceedings),	63.14
	$204.09

DISBURSEMENTS.—Expenses, as per orders, . .	$36.66
Stationery and postage, . .	3.08
Publication of Proceedings, .	126.27
Balance in Treasurer's hands,	38.08
	$204.09

The report was accepted, and the actions of the Committee approved.

On motion, the morning session adjourned.

Saturday, November 30, 3 P.M.

The Convention re-assembled, President Low in the chair.

Professor Munroe Smith, of Columbia College, made an address, of which the following is a synopsis, on

THE PHILOSOPHICAL FACULTY IN THE UNITED STATES.

I.

IT is the purpose of this paper to advocate the establishment in our higher institutions of learning of a university faculty of philosophy. I use the term "faculty" in a double sense—to describe at the same time a separate body of teachers and certain distinct groups of studies. I use the term "philosophy" in the sense in which it is used in the German university—as embracing those higher or university courses of study which find place in neither the theological, medical nor legal faculties—as including not only philosophy in the narrower sense, but also psychology and ethics, history and political science, historical and comparative philology and the pure natural sciences. I use the term "university" also in the sense in which it is used in Germany—as including all those advanced and technical studies which fit men for professional careers. I confine the term "college" to those courses of study which are necessary to prepare a man for the advanced work of the university.

My plea in this paper is not so much for the introduction of new studies as for a reorganization of our existing arrangement of studies. Most of the courses of the philosophical faculty are already pursued in the more advanced American colleges; but I do not think that these courses occupy their proper position in our educational system, or are properly co-ordinated with the other university courses. I think the German system is better than ours in both respects. I think the position assigned to the philosophical studies in Germany is calculated to secure their more effective development. I think that the way in which these studies are there co-ordinated with the other university studies (theology, law and medicine) exercises a most salutary influence upon the other faculties, and upon the whole intellectual life of the community.

If such a comparison as I here propose—a comparison of German and American educational methods—yields no other result, it should help to clarify our thought. But I think it will yield a more positive result. I do not think that there is anything so specifically German in the solution which this problem has found in Germany as to make it impossible for us to avail ourselves of the results of German experience, and to attempt a similar solution in the United States.

II.

The existing American system—or lack of system—can hardly be understood without some consideration of the history of American collegiate and professional education, at least during the last thirty years. A generation ago the college and the fitting school, taken together, did about the work that is now done in Germany by the "gymnasium." The studies of the German gymnasium, with the percentage of time commonly devoted to each, are as follows:

Latin	25	per cent.	
Mathematics	16	" "	65 per cent.
Greek	14	" "	
German	10	" "	
French	9	" "	
Geography and History	6.5	" "	
Natural Science	6.5	" "	35 per cent.
Drawing	6.5	" "	
Religion	6.5	" "	
	100.0		

Every one who knows what the American college was a generation ago will perceive that this list of gymnasial studies substantially covers the old college curriculum. In that curriculum, as in the present German gymnasial course, Greek, Latin and mathematics constituted the backbone of the entire education. Next in importance stood the students' native tongue. One other modern language was usually taught, and room was sometimes made for a little history and for the rudiments of one or two of the natural sciences. So far the parallel is complete. The college curriculum represented, of course, only the last half of a gymnasial education. The first half was given in the fitting school. Taken together, the fitting school and the college gave an education essentially identical in scope with that of the German gymnasium. Nothing more was attempted.

From the college the American who intended to pursue the study of theology, law or medicine proceeded to a professional school. He went from the college to the professionl school at about the age at which a German student now goes from the gymnasium to the university; and he left the professional school and entered upon the practice of his profession at about the age at which the German student now leaves the university.

A generation ago, therefore, our whole system bore a closer resemblance to the German than it now does. Just as the fitting school and college, taken together, corresponded to the gymnasium, both as regards the character of the studies pursued and the age of the average student, so our professional schools were, in a rough way, equivalent to the German university. We still lacked two of the most valuable points of the German university system: the philosophical faculty and the co-ordination of the university faculties. There was nothing corresponding to the German philosophical faculty; and the theological seminaries, the legal and the medical schools stood completely aloof from each other. But we had, structurally at least, a system of education less divergent from the German than that which now exists. And, as I have already said, the age-limits in our colleges and in our professional schools were practically the same as those in the German gymnasium and university.

Of course, the minus quantities I have indicated were very considerable quantities; the defects of the system were serious enough. On account of the lack of anything like the German faculty of philosophy, there was no opportunity for advanced education in the natural or social sciences. On account of the lack of anything like that faculty, the broadening and liberalizing influences which the German philosophical faculty exercises upon the professional schools were wholly wanting. Our schools of theology, law and medicine, as regards the spirit in which they were conducted, were technical schools rather than university faculties.

In the course of the last thirty years the American system has undergone important modifications. There has been a great and striking development in the opportunities afforded by our leading colleges for the prosecution of advanced philosophical studies. There has been an effort to fill the gap occasioned by the absence of the philosophical faculty. This end has been secured by the crowding advanced philosophical studies into the college curriculum. The limits of this paper will not permit any detailed description of the movement. It appears that the first pressure came from the natural scientists. Thirty years ago there was little opportunity for the study of the natural sciences either in the colleges or outside. We had at that time no such array of scientific schools as we have now; nor had we the preparatory schools which these scientific schools have called into existence. The entire pressure for recognition on the part of the natural sciences was therefore directed in the first instance against the colleges; and the natural scientists were largely successful in obtaining the recognition they sought. With the development of special scientific schools the pressure from this side has somewhat lessened. But these new scientific schools, largely practical in their aims, afford little room for the study of the pure, as distinguished from the applied, natural sciences, and the pressure of the pure sciences for recognition in the college has in no wise abated.

Close on the heels of the natural scientists came the teachers of philosophy,

psychology and ethics, of history and political science, of historic and comparative philology—all demanding room and time for their studies in the four years' curriculum of the college, and all in some measure obtaining their demand.

The result of this whole development has been a substantial modification of the American college. In order that the college might be in a position to satisfy these new demands, the requirements for admission were gradually increased; that is, a part of the college work was rolled off upon the fitting schools. But this change was not popular; it increased the age of graduation and the cost of education. It was not possible to gain enough time for the new studies in this way. A further innovation was therefore necessary—the introduction of the elective system. This innovation has commonly been regarded as one necessitated by the best interests of the student; and it has been commonly assumed that the demand for elective studies came from the students or their parents—from the public, that is, and not from within the college faculties. In my belief the real history of the movement is the reverse. The elective system became popular; but it was not established to meet a popular demand. Its establishment was a necessary result of the struggle on the part of the new teachers for time and for students. Given an adequate amount of time, a division of the students between the different instructors was absolutely necessary; and in the absence of any logical basis of division the colleges fell back upon a system of *laissez-faire*—a system which permitted the student to choose for himself which of the many courses offered him he would pursue, and to which of the many instructors competing for his attendance he would entrust himself.

The resultant evils are now fairly well recognized. They have been the subject of much discussion. I do not propose to examine anew the arguments for and against the elective system. I desire only to point out that all the evils of that system are due to the immaturity of the student, and that all its advantages are proportioned to his maturity. The explanation of the whole matter seems, therefore, to be this: that the elective system is essentially a university system, not a college system. The preparation of a student for advanced university work involves some coherent scheme of required study. The prosecution of university work, on the other hand, implies specialization on his part and, therefore, freedom of choice.

Some of the other results of the introduction of university studies into the college course have been less noticed and discussed. The character of the instruction given in the college has suffered from the confusion of university methods and disciplinary methods. The attempt is constantly made to compel the student to specialize and to investigate before he has acquired a sufficient basis of information. In the natural sciences he is set to widening the borders of knowledge by original investigation before he has had time to learn what the existing borders really are. In the social sciences he is taught to use the historical and comparative methods of study before he has acquired any real knowledge of history or familiarity with the data of his comparisons. The fault rests chiefly with the instructors; but where the instructors are at fault, it is because they themselves are university men who wish to do university work, and who have been put into the wrong place. They should be teaching graduate students; if they are forced to teach Sophomores or Freshmen, they teach them as if they were teaching grad-

uates. We see similar developments even in the old studies of the college curriculum, and even in the required studies. Many tutors of classics are teaching classics only because they have no opportunity to teach history or philology. They are full of ideas and of information in reference to history or to philology; they desire to diffuse these ideas and to communicate this information; and having no proper outlet for their real capacities and desires, they teach primitive law to the students of Homer, Roman political history to the students of Cicero, Sanskrit and comparative philology to students who are reading Aristophanes or Horace. The result, of course, is that college students are seldom able to read Greek or Latin. The vice of the older classical instruction in our colleges was the stress laid upon grammatical refinements; the especial vice of the modern instruction is the introduction of comparative philology. In both cases the trouble is that a man who should be instructing graduates—a grammarian or a philologian—is set to do disciplinary work with undergraduates.

Not less injurious has been the effect upon the professional schools of these changes within the college. A generation ago it was a tradition of American education that the clergyman, the physician and the lawyer should pursue the college course before entering upon their professional studies. The increased requirements for admission to our colleges and the resultant increase of the age of graduation have seriously broken in upon this tradition. College education is thought to cost too much, both in money and in time. The number of young men who enter the law schools and medical schools without any college training has steadily increased. Their presence has affected unfavorably the standard of education in these schools. Moreover, those students who have been through college approach their professional studies in a spirit unfavorable to the highest sort of university work. After one or two years spent in desultory wanderings over the broad domain of the elective philosophical studies, the student comes to the professional school impatient of theory and desirous of "practical" training. Both of these phenomena—the imperfect education of a part of their students, and the unfortunate temper and tendency of the other part—have made our law schools and medical schools more and more technical in character. At no period in their history were they real university faculties; but a generation ago they were less like trade schools than they have since become. The intrusion of large numbers of uneducated students has also necessitated the retention of disciplinary methods of teaching. In the German faculties of law and of medicine the professors lecture, and the *privat-docenten*—the tutors—hold quizzes. In many of our law and medical schools the professors are simply quiz-masters.

The theological seminaries have offered a more effective resistance to these tendencies. It is still true to-day that the majority of theological students complete the college course before entering the seminary. The reason is very simple: such generous provision has been made, both in the colleges and the theological seminaries, for the assistance of students preparing themselves for the Christian ministry, that the increased cost of the lengthened term of study has had comparatively little effect upon this class of students.

III.

The entire preceding discussion would indicate that a grave mistake was made when the philosophical studies, not previously provided for, were thrust into the

college curriculum. Almost all the evils which have ensued would apparently have been avoided if provision had been made for these new studies in the form of graduate courses. The question therefore arises: Why were these new studies not so provided for? Why were not graduate courses established in philosophy, psychology and ethics; in history and political economy; in the Oriental languages and comparative philology, and in the natural sciences, when the demand for instruction in these subjects first made itself heard?

It is evident that if this had been attempted thirty years ago few students could have been induced, in our eager American life, to pursue such graduate courses. Even the largest colleges would have secured few students; the smaller colleges could hardly have secured any. Almost the only students who would have pursued these courses, at the outset, would have been those who intended to fit themselves for the profession of teaching. Even as regards these students, philosophical faculties in America would have been at a disadvantage as compared with the philosophical faculties of Germany. In Germany, all persons intending to teach in universities or in gymnasia are legally compelled to pursue certain philosophical courses in the university. The same is true, in Germany, as regards those persons who intend to enter the higher branches of the civil service. In this country there is not only no such legal requirement, but there was not, thirty years ago, even a public sentiment demanding any special training of teachers or of government employees. To-day such a sentiment exists in reference to teachers, and such a sentiment is beginning to develop in reference to our civil employees. But the latter sentiment is confined, even now, to a narrow class; and those who do fit themselves for diplomatic or administrative positions have no assurance of appointment, nor, if appointed, any guaranty of permanent employment. As regards the natural sciences, finally, such graduate courses, if established a generation ago, could hardly have long sustained the competition of the technical schools. They would soon have been restricted to the pure, as distinguished from the applied, sciences; and they would have had few students except those who proposed to become teachers.

This is no mere *a priori* conclusion: it is borne out by the facts. In one institution, at least, an attempt was made, a generation ago, to provide for these groups of studies in graduate courses. The trustees of Columbia College attempted, more than thirty years ago, to establish in New York City graduate schools of philosophy and philology, of jurisprudence and history, of mathematics and physical science. The first three years of the college curriculum were to be so arranged as to prepare students for these schools; and the special work of these university schools was to begin in the senior year and continue for two years after the granting of the bachelor's degree. This broad scheme was, in part, set in operation in 1857, but was abandoned after one year's trial for lack of public support.

Again, it would have been difficult, thirty years ago, to establish any proper correlation between university faculties of philosophy and the professional schools. The professional schools themselves were not connected and co-ordinated as in the German university. This was, and is, a serious obstacle. The philosophical studies of the university are closely related to those pursued in the theological, legal and medical faculties. If these professional faculties had been properly co-ordinated, it would have been possible to establish philosophical faculties to sup-

plement the professional courses. The philosophical courses would have drawn a certain number of students—and these, too, men of the very best sort—from all the professional schools; and the influence of this leaven upon the professional schools themselves would have been very great. But so long as the professional schools were not co-ordinated, but independent, each working for itself, faculties of philosophy could not well be co-ordinated with them.

The question that now presents itself is whether, during the last thirty years, the conditions have so changed as to make practicable an arrangement which was then impracticable. I think that in some of the larger institutions this is the case. Wherever professional schools of law, theology and medicine, and great technical schools of natural science, exist in connection with a college; wherever these professional and technical schools stand in at least nominal connection with each other; wherever, in a word, the university exists, if only as a collection of unrelated fragments,—there there is at least a possibility of properly co-ordinating all these separate professional schools, and of supplementing their work by the establishment of faculties of philosophy. In such institutions, at least, these new faculties would have a basis of existence and a reason for existence.

But if this is to be done—if we are to recognize the philosophical studies as graduate studies, co-ordinate with the professional studies of theology, law and medicine —then the college must resume its position as preparatory school for all kinds of university work. The philosophical courses that have been introduced in the later years of the college curriculum must be taken out of the college and assigned to the university. Where the principle of free election has destroyed the disciplinary character of the lower years, the disciplinary curriculum must be re-established, even if the system of elective studies has to go by the board. Elective curricula may be necessary; but there should not be too many of them. Judging from German experience, there should be, in addition to the old classical and mathematical curriculum, a Latin-scientific curriculum; and where good scientific preparatory schools are lacking it may be justifiable to introduce a third elective course of a purely scientific character. Wherever the system of elective courses includes more than these three—with such combinations between the three as seem necessary—it appears to me that university specialization has intruded itself into the disciplinary years. The system of elective courses avoids one of the evils of a completely elective system; it holds the student to a coherent scheme of study, and prevents his absolutely wasting his time. But elective courses, if unduly multiplied, mean premature specialization.

Within the college, again, the line must be drawn between the disciplinary years and that year (or those years) belonging to the university. Such is the existing confusion in American education that it is not easy to say where this line should be drawn in any given college. In the better New England and Middle State colleges the line should be drawn, I think, about the end of the junior year. But wherever the line be drawn, all that lies beyond must be ceded to the university. When the disciplinary studies are ended the professional studies should begin. If the line is drawn at the end of the junior year, the seniors must be permitted to specialize freely; not merely within the limits of the philosophical studies, but in law, medicine and theology. The senior year must be made the first professional year. This will tend to check the movement of professional students away from

the college. It will lessen the inducement to avoid the college. It will increase both the number and the proportion of college-bred men in all our professional schools; and it may ultimately render it possible for the best professional schools to insist upon a preliminary college education. If the college gives up its senior year to the university, it can with better grace and with more reason demand of the professional schools that they plant themselves squarely upon the basis of the three remaining disciplinary years. Abstractly, it may be a very good thing that a young man who has completed his disciplinary studies should devote one year to advanced philosophical studies before entering his professional faculty. But we cannot insist upon this. There is no people more patient of education, more ready to postpone entrance upon active life for the sake of a thorough training, than the German; and the Germans will not do what we are asking the young men of America to do.

Whether the faculty of philosophy shall include in its organization all those studies which I have included in the general designation "philosophy," or whether some such differentiation of the philosophical courses as is already beginning to show itself in the most advanced European universities shall be attempted; whether, in a word, we shall have one faculty of philosophy which shall include the political and the natural sciences, or whether we shall establish special university faculties of political science, of natural science, and of philosophy as residuary legatee—these are questions which every American university must answer for itself, and answer according to the stage of development which it has reached. Wherever faculties of natural or political science have already differentiated themselves and are able to stand alone, it would seem natural that the new faculty of philosophy should be restricted to that domain of knowledge which lies outside of these established faculties.

The degree of bachelor of arts, I think, should be treated as a university degree. Thirty years ago it signified only that the bearer had completed a course of disciplinary study. To-day it means that he has also prosecuted one year's work in the philosophical studies of the university. I think it would be inadvisable to ignore this change. I should not favor the proposal to give this degree at the end of the present junior year. It should be conferred, I think, only after one year of university work. By treating it as a university degree something might be gained: the American tradition that it indicates a completed education might be shaken; non-professional students who had entered the university faculty of philosophy for the bachelor's degree might be a little more inclined to pursue its courses for the master's and the doctor's degree.

I have already indicated that after completing the junior year a student should be permitted to make his bachelor's degree, not in philosophy only, but also in theology, law or medicine. It might be advisable not to allow him to obtain this degree on professional courses solely, but to require the addition of some cognate studies in the faculty of philosophy. This, I think, would help to break down the barriers between the schools, and enable the faculty of philosophy to do its best work—that work which makes it the crown and glory of the German university system—the work of broadening, liberalizing, humanizing all the professional courses of study.

Professor Edmund J. James, of the University of Pennsylvania, discussed the paper just read, dissenting from some of the writer's conclusions.

Professor J. Rendell Harris, of Haverford College, read the following paper on

THE RIGHT REFORM OF EXAMINATIONS.

THERE has been so much said during the last twelve months on the subject of examinations, especially on the subject of examinations in England, that it might almost seem out of place, after the discussion has been practically closed and all the morals appropriately pointed, for another half-hour to be claimed for this burning question.

I was once present at a military review where after grand discharges of ordnance and artillery, in one of the pauses of the parade a soldier fired off his piece by accident. The effect produced by this solitary explosion after the rolling volley of a thousand guns was something exquisitely ridiculous; it was a picture for all time of the man who was behind time.

> "How many things by season seasoned are,
> Unto their due perfection,"

and how easily we may find ourselves out of season.

For our own dignity's sake, then, we shall not offer any remarks upon a discussion which has become historical. We will proceed, not only as if the war-drums beat no longer, but as if they had never beat at all. The other battle-flags are permanently furled before mine is thrown to the breeze. We have no wish even to contribute to the popular intellectual enjoyment of a symposium: let others disprove what Brutus may have spoken, or suggest what he should have said; and especially we will avoid the anomaly of taking part in an intellectual conflict over the evils of intellectual competition.

Suppose, then, we begin by following the method so wisely given us on a recent occasion by Mr. George William Curtis, when he intimated that every political contingency was anticipated by Shakespeare. May we not say that the question of examinations furnishes no exception to this comprehensive and significant statement—a statement which not merely implies that Shakespeare is to be the *vade mecum* of the politician (may he always be found in such good company!), but teaches us that the true political education is a literary one. If this is true of politics, how much more of pedagogics! Now it may be surprising to some to hear that Shakespeare has not merely spoken out on the subject of the civil service, but that he has dealt closely with the subject of examinations, and has dramatized the situation for us in his own inimitable manner.

I refer to the exquisite scene in the "Merry Wives of Windsor," where little William is put through the first pages of his Latin Grammar by Parson Evans, while the admiring relatives look on and Mistress Quickly performs the part of referee.

Mr. Ignatius Donnelly, in his charming work on the secret history of Shakespeare, has pointed out the important consequences which follow from the study of this

scene. He shows us by consideration of the fact that this scene is not found in the earlier form of the published play, and is easily detached from the modern form, that it has an esoteric meaning, and that this meaning is that the little hero of the scene is none other than Shakespeare himself, of whom we have good warrant for believing that he knew little Latin, and less Greek; while the introduction of the remark by Mrs. Quickly that "Hang-hog is bacon," incorporating a well-known story of Sir Nicholas Bacon, is a sufficient intimation that the scene is one in which the reader is directed to carry his thoughts from the pitiful personality of the playwright to the august chancellor who is using him as a mask and a speaking-trumpet.

I shall agree with Mr. Donnelly so far as this, that I admit the scene to be Baconian, but in a sense which he does not notice; for it deals with the subject of the advancement of learning, and what is for my purpose more important, with the advancement of learning as tested by examination.

I take this scene to be an ironical representation of the erroneous methods which may be applied in examination. It is a concatenation also of the meannesses to which a student may be subjected by an examiner. First of all, the examination is sprung upon the unfortunate youth unexpectedly, and that, too, on a holiday, when Master Slender had let the boys leave to play. Then it is conducted by his own teacher (for little William is evidently an Eaton boy and Dr. Evans the head-master), and no teacher ever can handle his own students. Then it was conducted by leading questions: "William, what is he that doth lend articles?" to which William could hardly reply anything else than that articles were borrowed of the pronouns. Then he is expected to give the answer in the words of the book, and when William says the Vocative is O! he is corrected and made to say that the Vocative is *caret:* a proceeding, by the by, which I can only parallel by the case recently reported from a school board in Australia, where a child was refused marks for replying to the question: "Why should we obey our parents?" by quoting the language of the Decalogue, when the real answer from the text-book should have been, "Because they feed me and clothe and give me an education." So William is taught that Vocative is "caret," a truth to which Mrs. Quickly adds the explanatory and necessary gloss, "That is a good root."

And finally, when the examination is ended, the student is given the back-handed compliment that "he has a good spry memory," or in other words, as we should say, he merely crammed his lesson.

It must be admitted that in all this proceeding our sympathies go, as educators, with the boy and not the parson; and I shall take the liberty to draw the moral at large from the incidents recorded, that if anything is wrong with any given system of examination, *the first thing to be reformed is the examiner;* and I shall ask the question, "How may our examinations and examiners be reformed short of the drastic and popular method of reforming them altogether?" I assume, that is, that an examination is not a hopelessly bad thing: it would take me out of my way, for example, to discuss the position of a writer, in a recent educational magazine, who maintained that the abolition of examinations would be a moral thing, in view of the cheating which was carried on in them, and who did not even take the pains to show (what he must have known) that the students who cheat at examination cheat more or less all along the line.

The advantages derived from the application of some test to the student are so real that the best students and the best teachers will, I believe, always agree that some form of concentrated recapitulation of a given study is desirable; nor is it in the least degree likely that the best institutions in the country will ever confer their degrees merely on the production of a certificate of satisfactory attendance, plus, perhaps, a thesis. Let us, if you will, start by saying that all examinations carry certain not easily defined good results, and admit at the same time that our present system contains also not a few strongly defined evil results; and let us ask how to reduce the latter and augment the former.

Now, supposing we start from the admission that examinations of students, either with regard to what they have done, or with the intention of finding out what they can do, or with both these objects in view, is a beneficial thing, it follows that there is some one kind of examination which will offer more of the implied advantages than any other, and some one species of examiner who is able to conduct just such an examination of maximum utility, because he has before his mind a definite idea of what constitutes the utility and an equally definite idea of the manner in which that effort after utility be made, and we may determine the point at which an examiner should aim in the following manner:

Let us use a mechanical illustration to clear our ideas. We have said an examiner is to aim at something. Now it is evident that if the thing aimed at were a gun, that the projectile would have a certain range on the plane of projection; if the projectile be fired vertically it will fall to the point from which it started, and its range is zero; if, again, it be fired horizontally, it strikes the grass at an infinitely short distance, and the range is zero again. Between these two minimum ranges, corresponding to a vertical elevation and a horizontal projection respectively, there is somewhere a maximum range which can be obtained by a proper elevation of the gun; and, as a matter of fact, it is in this case the elevation exactly intermediate between the other two positions. Now an examination of a given group of students is exactly like this in one respect: whatever be the end desired, there are two ways of obtaining a zero result, and between these ways lies somewhere the way that gives a maximum result. For we may say, make the examination so easy that all subjects of the examination will pass it equally; or make the examination so hard that all will fail in it equally. In these cases, whatever may be the good aimed at, the good attained is zero, for a test which all pass is the same in value as one in which all fail; and it is even worse in some respects, for it is ridiculous; its allegorical form is the celebrated Caucus Race in "Alice in Wonderland," where after running a certain length of time the competing animals are stopped by the announcement that all have won and all must receive prizes.

Thus we find the *reductio ad absurdum* of examinations in the attempt to make all of a group of students satisfy equally a certain test. Like the farmer with the French wine, they haven't dot any forrader! Either actually or by implication there must be some persons left behind. An educational test in politics would cease to be applied as soon as it became certain that no one would be disqualified; and so in other cases. A civil-service examination, say for a post office qualification, in which all the candidates came out equally good, would be of just the same value as one in which they came out all equally bad. The only persons that it

would satisfy would be those who had secured the means of climbing up into office some other way.

But if we grant that there are two methods of examination which produce minimum advantage, what is the intermediate method which produces maximum advantage? and what, in particular, is the advantage produced?

Let us use another physical illustration. Imagine a person setting a train of prism of glass so as to produce a solar spectrum. A ray of light is allowed to pass through the prism, and the prism or train of prisms should be so set as to produce the greatest possible dispersion between the different colors of the ray. May it not be that one of the things which we are in search of is how to produce dispersion amongst the students.

If, for example, a very easy examination—an infinitely easy one—produces zero dispersion amongst the students, for they all pass it, and an infinitely hard examination, or one which is practically infinitely hard, produces again zero dispersion, for they all fail alike to pass it, then there is somewhere an examination or an examiner which produces maximum dispersion amongst the students, and this is the examination to be sought after. And, indeed, this is practically found to be the case, that a well-conducted examination *divides the students one from another, like the opening out of a fan.*

I affirm, then, that the first thing to be aimed at is to produce dispersion among the group of persons presented for examination.

Arrange them in order first, and if you wish crown them after. Observe, I do not say how the final dispersion is to be chronicled, whether by grouping in classes, or by the use of brackets, or by "blocks of five," or by any other method; but I do say that you cannot measure a dispersion until you have produced it, and dispersion in some form or other we must have. Just as the good teacher aims at producing a maximum dispersion between two students, viz.: the student at the beginning of the term and the same student at the end of the term, so the good examiner must test his group of presented students for dispersion, and the more dispersion he produces the better examiner he is. And this is true, whatever be the nature of the standards by which we finally classify. The more dispersion is produced the more satisfactory the final classification will be. I have dwelt longer, perhaps, than necessary upon this point, because it involves a principle which is sure to be hotly denied, viz.: that methods which aim at democratic results have no place in examinations. Students are not born equal; and if they were, we don't propose to examine them in their amorphous initial stage of molecular similarity, but at some future time, when they have travelled sufficiently far from the dead selves of their first consciousness and are sufficiently differentiated from their living companions. It is not the *virum* that we are studying, but the *virum ex ovo.* Our business is to show how *unequal* students are to one another; and the right way to do this is not by setting up a standard of passing and failing, as if there were only two conceivable students, A and not A (the elect and the non-elect), nor by the *à priori* assumption that there are four conceivable classes of students, say A, B, C, D, of which D stand for the non-elect; but by recognizing that there are in reality as many classes as there are students, and trying to make this fact as patent as possible by the process of examination, we can come to the question of ticketing and bracketing afterward.

Now I can imagine some one saying, at this point, that I must be wrong in my method, because if dispersion be the thing to produce by examination, then the examination of a single student is an impossibility. For how can we measure dispersions when there are not at least two. We may admit that a group of students is, like a sunbeam, compounded of many different rays, which can be separated one from the other, but your single student must be monochromatic. How can you get any dispersion out of him?

A little consideration will, however, show that the student is not really being examined singly. For suppose we say he is being examined for a certain standard. What is the standard, except a generalization from certain previously observed dispersions? Thus when we say a man has taken a first class in mathematics, we mean that in the dispersions of examinations held in different years lines have been drawn across the band of dispersed students for purposes of reference. Then these dispersions may be imagined superposed, so that the students of 1880 are, as it were, superposed on the students of 1879, and so on, and we arrive at an approximate idea of what a first class in mathematics means, and the conventional term becoming at last a practical reality. If, then, a solitary student were to present himself for examination in mathematics, the object of the examiner is to find him his place in the historical dispersions of mathematical students of earlier days. He is not really examined single at all.

And, further, it appears from the above that the standards are not really marks, but men, or rather they are by marks that they may be of men. Any such theory of examination as proceeds by saying, "We call a perfect recitation or examination 100, and we reject any candidate who does not obtain 50 per cent.," is a theory which is artificial, or at any rate secondary, for we do not know what we mean by 50 per cent. in certain subjects, and different judges mean different things. The one thing in which competent judges will generally agree is in the order of the dispersion. The marks themselves are only an attempt at the expression of that, although, of course, good marking is a fine art, and no one can make his judgments altogether independent of numerical measurements.

I repeat, however, that the whole process of classification of students is an induction, based upon the observation of dispersion. And it follows, therefore, that the democratic method, which aims at producing the greatest possible number of equal and similar molecules, each ticketed with the same mysterious alphabetic symbols, is unscientific, because it reduces dispersion almost to the lowest possible point. All the students, or nearly all, obtain a certain title, and we are reminded of what Macbeth says to the murderers who plead to be identified with the human race:

> "Shoughs, water-rugs and demi-wolves are all
> Clept by the name of dogs."

We may be perfectly right in detesting an aristocracy that comes by birthright, and may have succeeded in abolishing it; but the aristocracy of good and well-trained scholarship will assert itself not less, but more, as the remainder of time passes by. It robs no one by its own enrichment.

Now let us go on to apply these considerations to the university life of America —of all sides of our living the most alive, the most expanding. Our universities, thank heaven, are spreading faster than our cotton-mills or our oil-wells. We

have more capital invested in educational apparatus than any other country in the world. Our leading university men are becoming more and more the recognized thinkers and the chosen mouthpieces of the people. Nowhere in the world is the college in such close touch with the community as here. (Indeed we have not as many educated hermits as we ought to have.) All that is being done in education is "of the people, for the people and by the people." What a magnificent opportunity; what an almost boundless horizon! Let us then ask ourselves a few questions as to the value of the finished product which comes from all this raw material.

It is written in the Scriptures that upon a certain occasion the patriarch Abraham having made a "deal" in real estate proceeded to pay over the necessary shekels, and the record appropriately says that the tender which he made was money which passed *current with the merchant.* Brethren, let me ask you, in a pastoral manner, does your educational dollar pass current with the merchant? and if not, how many cents is it good for?

The answer to these questions is rather an unpleasant one, for we find to our amazement that there are as many currencies as there are institutions, from which it follows at once that the merchant who took the coins at their face value would be a fool. Every college is coining the B.A., and throwing him into society, so that the state of things is something like what one finds in Eastern travel, where the greater part of one's loose time is spent in calculating the value of one's loose change, in expressing a French franc as a fraction of a Turkish medjidie, or in trying to find out why the same coin is worth so many piastres more in Nablous than it is in Jaffa. How many sorts of B.A.'s are there in this country, and can you express one in terms of the other?

And we may depend upon it that when we find this anomalous state of things we have somewhere fallen foul of a fallacy in our educational methods. Now the fallacy does not consist in the fact that we have failed to discriminate between the college and the university; for there is no difference in this country between the one and the other; the university is only the college writ large. An endowment would make the latter into the former, without any change of function.

If any one doubts this I offer him Haverford College as a corpus vile to experiment upon. Where the fallacy lies is in a matter which concerns both alike, the so-called college and the so-called university, which is equally noticeable in a great salt-water college like the University of Pennsylvania, or in a little fresh-water college like Haverford; it lies in the fact that the teachers examine their own students, and, as a matter of consequence, neither the students nor the teachers are ever reached by an adequate test. And, strange to say, this applies to the most advanced degrees as well as to the humblest. They are all of them, when analyzed, a benefaction to the scholar from his teacher, so that it would hardly be too much to say that all degrees are given by the courtesy of the instructor, and none of them "honoris causâ." So strongly does this impress me that I have made it a matter not merely of educational observation by noting the different kinds of worthless people that are decorated by their too fond Alma Maters, but I have made it a matter of personal psychological investigation, and have noted in my own case that I am both teaching and examining worse in consequence of my residence in this country than I used to do, because no one

tests my teaching except myself, and I do not bring my own deficiencies as a teacher into sufficient prominence; and further, in dealing with the students, my aim is to let them all through, or nearly all, on as good a grade as possible, because I am one of those persons who would not willingly set foot upon a worm, especially worms that would turn—and rend you. I feel sure that a scientific supervision from time to time would do me and my classes good. And I have reason to believe that there are many like myself who would be unspeakably thankful if they had the check upon their work and the encouragement of a competent external examination.

The trainer is disqualified from being an umpire; if he has oiled the athletes let some one else act as the judge, *Βραβευτης*, and then when he offends or condemns the trainer will share appropriately both the praise and the blame. Here then is a direction in which educational reform is comparatively easy, and in which it is sure to be effective.

Now let us take an instance of this in practical life. Thirty years ago the grammar schools of England were in a most deplorable condition, both as to the extension and intention of their studies. The older studies were followed in a merely conventional manner, the newer studies almost entirely neglected. The public had no means of knowing when the scholarship of a school was on the increase, except in the rare cases where university entrance scholarships were obtained; nor had they any protection when the grammar schools lapsed into inefficience. Competition and comparison between school and school were limited to the cricket field, an athletic test, which under the best system obtains more than its due weight, but under the old methods was omnipotent, being alone.

In this discouraging state of affairs the University of Cambridge commenced its local examinations, offering to scholars of all schools and of no schools a standard examination for students of a given age, held at a given time, at a number of given centres, and in a given range of subjects; and they published annually the class-lists of these examinations, with the names of the students, and of their schools and schoolmasters, as well as the papers that had been set. This movement has been, I think, in spite of the fact that it only touched the better scholars in any given school, the regeneration of the English grammar schools; it has furnished them with an intellectual standard of reference; it has provided the universities with a large amount of raw material in the shape of men who, but for the examination, would never have been found out; and it has detected the good teachers just as it has done the scholar; so that many a struggling, but efficient, teacher has attained the recognition which his abilities deserved. I have drawn attention to this system because it furnishes us with an illustration of the way in which a great step was taken in England toward the unification and regeneration of our high school teaching. And it is plain to me that somehow in the same manner, either by an association among colleges or by a bold step taken by some very strong college, we must obtain the missing link in our educational system, and find the standard of reference that we are looking for. So that instead of trying to eke out unsatisfactory bachelor's degrees by almost as unsatisfactory advanced degrees, or going to Germany in search of a culture which we have democratically refused to promote at home, a form of pilgrimage rendered necessary by our academical deadly sins, we should be united together by a common resolve to

test our educational work thoroughly and conscientiously, and with the full intention that we *will gather only the good fish into their appropriate vessels, and throw the bad away.* And the group of colleges that either in graduate or undergraduate work, accomplishes this reform will direct the academical life of the continent in the twentieth century.

In the absence of Professor Edward H. Magill, of Swarthmore College, the following letter was read by Professor Benjamin Smith, of the same College:

ROUEN, FRANCE, 10*th Mo.*, 1889.

Fellow-members of the College Association of the Middle States and Maryland:

ESTEEMED FRIENDS: It is a source of great regret to me that my absence in Europe must prevent my being with you on the deeply interesting occasion of your annual gathering this autumn, in the halls of the ancient and honorable University of Pennsylvania, and contributing my share toward advancing the very important work in which you are engaged. I believe that the Association is destined to be, in the near future, a powerful influence for good in the educational world, and that the highest interests of our colleges and universities, individually and collectively, as well as the general interests of public education, are to be greatly promoted by it. Although necessarily absent from your meeting, I have promised your chairman a contribution upon some topic of general interest. I had thought at first of taking that very interesting theme, to myself at least, and I doubt not to many of my fellow-members: "The best method of teaching the modern languages." Upon further reflection, however, and considering the fact that my own views are in a somewhat transitional, not to say chaotic, state at present upon that subject, I have concluded that it will be better to defer the treatment of it for the present, that what I may at length have to say may have at least the value of the words of one who speaks from a varied experience and long observation upon a subject to which much of his life has been devoted.

I have, therefore, decided that I will at present confine myself to a subject which I have already brought to the notice of the Association at various times and in different forms, and the present status of which in our own State of Pennsylvania cannot fail to be a matter of general interest to the friends of education everywhere. I refer, of course, to the proper professional preparation of teachers for the work in which they are to be engaged. And in this statement I wish to be understood as covering the whole ground, and including all who are to devote themselves to the important work of giving instruction, in colleges and in schools of every grade. If our Association has one prominent and distinctive mission, it seems to me to be the creation of a strong public sentiment in favor of the more general diffusion of the higher education, and, as one of the most effective means to this end, the securing of a full college course of study for teachers of all schools, of every grade. I need not reargue this question here, having sufficiently dwelt upon it in previous papers, and my more definite object at present is to speak of what has been attempted in Pennsylvania toward preparing the way to secure this desirable end. Our committee of three, who were appointed upon this gen-

eral subject last year, has never met, as a committee, one of its members through ill-health having been long absent abroad. The other two members felt that, though not authorized as yet to act on behalf of the Association, they would, as individuals, endeavor to see what legislation could be secured in Harrisburg toward this end. We drew up a bill for the consideration of our Legislature, and succeeded in getting a hearing before the Education Committee of that body, to which it was referred. The features of this bill were simple, and it was so drawn that its passage would not, at least at present, involve the State in any additional expense. Amid the general pressure of bills that had to fight their way through the Appropriation Committee this was thought to be a very politic feature. It simply proposed to give to the graduates of colleges which maintain a regular two years' normal course among the elective studies for the last two years, on completing this course, and taking their regular degrees, full eligibility for positions as teachers in our public schools, on the same footing as normal graduates and without further examination. Our representations before the committee and answers to their questions impressed them favorably, and the bill went up with their unanimous indorsement. We also had some encouragement from our Senators, who believed that if our bill reached that body it would be passed. But little opposition was shown in the House at first, but as its turn upon the calendar was approached a strong opposition began to be developed, and I have been credibly informed that it came from those especially interested in our normal schools. As there was no proposition to take any of the money which would otherwise fall to normal schools to aid colleges with normal departments, it may be difficult to see upon what this opposition could have been based. Could it be that the normal men did not wish their graduates to be placed in competition with the graduates of the colleges when the latter were freed from their present unjust legal disadvatages? It would seem as if this unworthy motive must have been the explanation. Be that as it may, the opposition became active, and when the voting came we fell just three short of a majority. Considering the nature of the law proposed, the novelty of such legislation as yet, and the general condition of the question of normal instruction in our State, we felt encouraged by the result, for we had very little hope in the beginning of securing a majority the first year. Our friends in the Legislature now tell us that they have warned the normal men that if they continue their factional opposition to our Educational Reform bill in the next Legislature they will defeat the appropriation for the normal schools. This will probably deter opposition and secure the passage of the bill. But this bill, as drawn by us, is far from perfect, and should be materially improved before it is again considered. If such a bill, with proper modifications, can come before our Legislature, backed by the influence of the College Association, its success may be regarded as secured in advance. I would, therefore, respectfully suggest that this whole subject be referred to a judicious committee, with power to act, to take the necessary steps toward bringing a proper bill before the next session of the Legislature of Pennsylvania, 1890–91, and also to secure the passage of similar laws in other States. I would say to those colleges not having and not wishing to introduce a normal course as one of their elective studies that the passage of such a law would not in the least interfere with their exercising their right of choice in this respect. Still, I think that a well-sustained course of pedagogic training as an elective in a col-

lege course may be made very profitable to college students, and even to those not intending to pursue the occupation of the teacher, as such training helps to fix and digest the instruction received in other departments. Everything depends, of course, upon the character of the normal departments themselves, and these are necessarily dependent upon those who are selected as the heads of these important and, for our colleges, comparatively new departments. But competent persons can be secured; and if the need exists, as I believe it does, as in all other cases the demand will bring a supply in a very few years. If some of our colleges object on the ground that this change involves another—the general admission of women to our colleges, as they must, from their natural superior qualification as teachers, constitute the greater number of teachers in our public schools—my answer to this objection is that, so far from being an objection, it is really one of the favorable features of the plan that it necessitates this change, and that it is, therefore, to be made one of the means of opening the benefits of all of our colleges to the women of our country. The inevitable trend of all progress is now in this direction, and those colleges are to be the living colleges of the next generation which acknowledge this tendency, and make the necessary preparation for it.

EDWARD H. MAGILL.

The resolution proposed in Professor Magill's paper was by vote referred to the Executive Committee.

On motion of Professor Griffen, it was *Resolved*, That the thanks of the Convention be returned to the officers of the University of Pennsylvania for the kindness, courtesy and hospitality rendered to the members of the Convention during the present session.

On motion, the Convention adjourned.

CONSTITUTION

OF THE

COLLEGE ASSOCIATION

OF

THE MIDDLE STATES AND MARYLAND.

ARTICLE I.

NAME AND OBJECT.

SECTION 1. The name of this Association shall be THE COLLEGE ASSOCIATION OF THE MIDDLE STATES AND MARYLAND.

SEC. 2. The object of this Association shall be to consider the qualifications for candidates for admission to the Colleges and the methods of admission; the character of the Preparatory Schools; the courses of study to be pursued in the Colleges, including their order, number, etc.; the relative number of required and elective studies in the various classes; the kind and character of degrees conferred; methods of College organization, government, etc.; the relation of the Colleges to the State, and to the general educational systems of the State and country; and any and all other questions affecting the welfare of the Colleges, or calculated to secure their proper advancement.

ARTICLE II.

MEMBERSHIP AND VOTING.

SECTION 1. Any College in the Middle States and Maryland may be received into membership in this Association upon approval of the Executive Committee.

SEC. 2. In transacting the ordinary business of the meetings of the Association all delegates present shall be entitled to vote, but on all questions requiring a decision *by ballot* each College represented shall have but one vote.

ARTICLE III.

OFFICERS.

The officers of the Association shall be a President, one Vice-President from each State represented in the Association, a Recording Secretary, Corresponding Secretary, Treasurer, and an Executive Committee of four members, besides the officers above mentioned, who shall be, *ex officiis*, members of the Executive Committee. These officers shall be chosen at the annual meeting, by ballot, and shall hold office for one year, or until their successors have been elected. The Executive Committee shall elect its own chairman.

ARTICLE IV.

DUTIES OF OFFICERS.

SECTION 1. The President, or in his absence the Vice-President, shall preside at all meetings of the Association, and sign all orders upon the Treasurer.

SEC. 2. The Recording Secretary shall keep a record of all business transacted by the Association. The Corresponding Secretary shall conduct the necessary correspondence.

SEC. 3. The Treasurer shall receive and hold all moneys of the Association, and pay out the same upon a written order of the President.

SEC. 4. The Executive Committee shall prepare business for the Association, fix time and place of annual meeting, call special meetings, and act for the Association in its recess; but the acts of this committee shall always be subject to the approval of the Association.

ARTICLE V.

MEETINGS.

There shall be one annual meeting of the Association, for the election of officers and the transaction of other business. Unless determined by the Association, the date and place of holding this meeting shall be decided by the Executive Committee, which committee shall also have power to call special meetings of the Association.

ARTICLE VI.

EXPENSES.

The expenses of holding the meetings of the Association, conducting the correspondence, printing, etc., shall be equally assessed upon the Colleges represented in the Association.

ARTICLE VII.

POWER OF THE ASSOCIATION.

Decisions by the Association, of questions not pertaining to its organization, shall always be considered *advisory*, and not *mandatory*, each College preserving its own individuality and liberty of action upon all other subjects considered.

ARTICLE VIII.

RELIGIOUS TESTS.

No religious tests shall be imposed in deciding upon membership or other privileges in this Association.

ARTICLE IX.

A QUORUM.

Representatives from one-third of the Colleges belonging to the Association shall constitute a quorum for the transaction of business.

ARTICLE X.

CHANGE OF THE CONSTITUTION.

This Constitution may be altered or amended at any regular meeting by a vote, by ballot, of two-thirds of the Colleges represented at said meeting.